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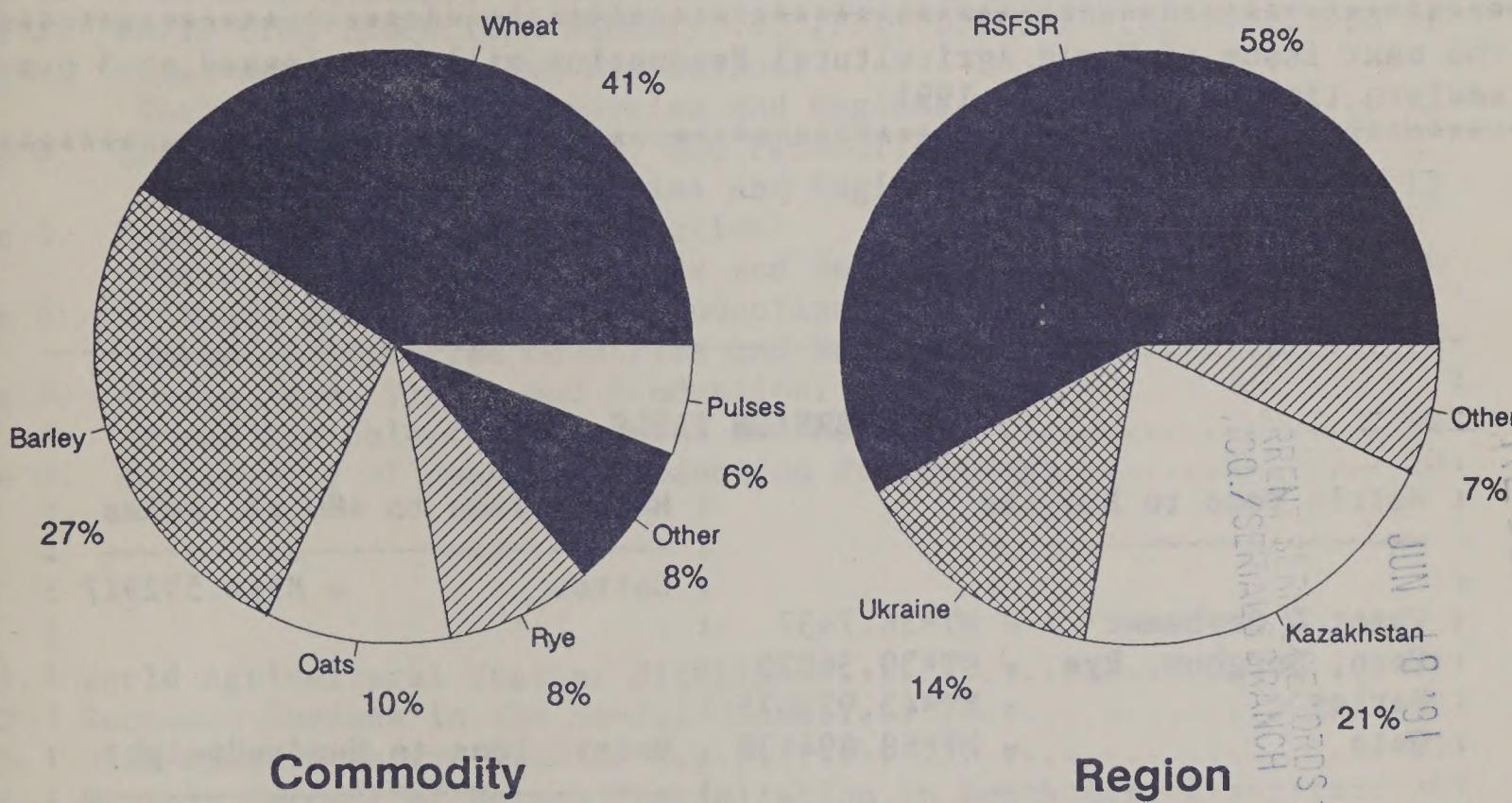
United States  
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Agriculture

Foreign  
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Service

Circular Series  
WAP 2-91  
February 1991

# World Agricultural Production

## USSR TOTAL GRAIN AREA (1985-1987 Percentages)



### Production Articles This Month...

- Soviet Regional Grain Production
- Corn Production in South Africa
- Deciduous Fruit and Table Grape Situation
- Foreign Cotton Area Indications
- Dairying in Germany
- EC-12 Rapeseed Planting Intentions
- Senegalese Agricultural Production
- Indonesian Oilseeds

This report draws on information from USDA's global network of agricultural attaches and counselors, official statistics of foreign governments, other foreign source materials, and results of office analysis. Estimates of U.S. acreage, yield, and production are from USDA's Agricultural Statistics Board, except where noted. Text and numbers in this report are based on unrounded data and detail may not add to totals because of rounding. This report reflects official USDA estimates released in World Agricultural Supply and Demand Estimates (WASDE-251), February 11, 1991.

This report was prepared by the Production Estimates and Crop Assessment Division (PECAD), FAS/USDA, Washington, D.C. 20250. Further information may be obtained by writing to the division or by calling (202) 382-8888 or by FAX (202) 447-7729.

\*\*\*\*\*  
\* The next issue of World Agricultural Production will be released at 3 p.m. \*  
\* eastern time on March 12, 1991. \*  
\*\*\*\*\*

CONVERSION TABLE

: Metric Tons to Bushels	: Metric Tons to 480-lb. Bales
: -----	: -----
: Cotton	= MT*4.592917
: Wheat & Soybeans = MT*36.7437	:
: Corn, Sorghum, Rye = MT*39.36825	:
: Barley = MT*45.929625	:
: Oats = MT*68.894438	: Metric Tons to Hundredweight
: -----	: -----
: 1 hectare = 2.471044 acres	: Rice = MT*22.04622
: 1 kilogram = 2.204622 pounds	:

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## PRODUCTION HIGHLIGHTS FOR 1990/91

February 1991

**WHEAT:** World production for 1990/91 is estimated at a record 589.0 million metric tons, down 4.2 million or less than 1 percent from last month, but up 10 percent from last year's harvest. Country highlights are as follows:

- o United States Production is estimated at 74.5 million tons, up 34 percent from last year. There was no change this month.
- o India Production is estimated at 49.7 million tons, down 4.3 million or 8 percent from last month, and down 8 percent from last year's record harvest. Harvested area and yield are estimated lower.
- o Australia Production is estimated at 15.7 million tons, up 0.2 million or 1 percent from last month and up 11 percent from last year. Excellent finishing conditions in the western growing region boosted estimated crop yields.

**COARSE GRAINS:** World production for 1990/91 is estimated at 825.8 million tons, up 1.9 million or less than 1 percent from last month and up 3 percent from last year. Country highlights are as follows:

- o United States Production is estimated at 230.6 million tons, up 4 percent from last year. There were no changes this month.
- o Brazil Production is estimated at 24.9 million tons, down 1.0 million or 4 percent from last month, but up 10 percent from last year. Corn yield is estimated lower due to insufficient rains during the critical silk-tassel growth stage.
- o Australia Production is estimated at 6.8 million tons, down 0.2 million or 2 percent from last month and down 2 percent from last year. Sorghum and corn area are estimated lower owing to drought and diversion to alternative crops, while barley and oat yields are estimated higher.
- o India Production is estimated at a record 35.0 million tons, up 2.7 million or 8 percent from last month and up 1 percent from last year's record harvest. Based on official Indian statistics, crop yields for sorghum, corn, and millet are estimated higher while barley is estimated lower.

o Nepal

Production is estimated at a record 1.4 million tons, up 0.3 million or 27 percent from last month and up 27 percent from last year. Record estimated summer corn production contributed to the upward revision.

**RICE (MILLED-BASIS):** World production for 1990/91 is estimated at a record 349.9 million tons, up 1.7 million or less than 1 percent from last month and up 2 percent from the 1989/90 crop. Foreign production in 1990/91 is projected at a record 345.0 million tons. U.S. output is projected at 4.9 million tons, unchanged from last month, but down 4 percent from last year. Country highlights are as follows:

o India

Production is estimated at a record 75.0 million tons, up 2.0 million or 3 percent from last month and up 1 percent from last year's crop. Harvested area and yield are estimated at record levels, reflecting excellent monsoonal weather.

o Nepal

Production is estimated at a record 2.3 million tons, up 0.3 million or 15 percent from last month and up 21 percent from last year. Above average rice plantings, along with higher yield from favorable monsoonal weather, contributed to the estimated record crop.

o Laos

Production is estimated at 1.1 million tons, up 0.2 million or 20 percent from last month and up 27 percent from last year. The increase is attributed to higher estimated area and yield.

o Thailand

Production is estimated at 12.0 million tons, down 0.9 million or 7 percent from last month and down 12 percent from last year. The reduction in yield and area is primarily based on heavier-than-expected insect damage on the main season crop and a reduction in plantings of the second crop.

**OILSEEDS:** Total world oilseeds production during 1990/91 is forecast at a record 216.9 million tons, down 0.2 million from last month, but up 3.0 million or 1 percent from 1989/90. Foreign production during 1990/91 is projected to be a record 156.4 million tons, down 0.2 million from last month, but up 1.7 million or 1 percent from last year. U.S. total oilseed production is estimated at 60.6 million tons, unchanged from last month, up 1.3 million or 2 percent from last year.

\* **Soybeans:** World production for 1990/91 is estimated at 105.1 million tons, down 0.4 million from last month and down 1.7 million or 2 percent from last year. Total foreign soybean output is estimated at 52.8 million tons, down 0.4 million or 1 percent from last month and down 1.7 million or 3 percent from 1989/90. Country highlights are as follows:

o United States

There was no change in the USDA official estimate by the National Agricultural Statistics Service this month. Production is estimated at 52.3 million tons, unchanged from last month, but down marginally from last year.

o Brazil

Production is estimated at 17.5 million tons, down 0.5 million or 3 percent from last month and down 2.5 million or 13 percent from last year. As a result of field travel by the agricultural attache, Sao Paulo, and FAS staff in January, planted area has been adjusted downward. Harvested area is now expected to fall by 1.5 million hectares or 13 percent from last year.

o India

Production is estimated at a record 2.1 million tons, up 0.1 million or 5 percent from last month and up 23 percent from last year's record output. Harvested area is estimated to reach a record 2.2 million hectares.

\* **Cottonseed:** World production for 1990/91 is forecast at 33.7 million tons, down 0.3 million or 1 percent from last month, but up 2.3 million or 7 percent from last year. Total foreign production is estimated at 28.1 million tons, down 0.3 million or 1 percent from last month, but up 1.0 million or 4 percent above last year. Country highlights are as follows:

o United States

There was no change in the USDA official estimate by the National Agricultural Statistics Service this month. Production is estimated at 5.5 million tons, up 1.3 million or 30 percent from last year.

o India

Production is estimated at 4.3 million tons, down 0.2 million or 3 percent from last month and down 0.3 million or 6 percent from last year's record crop. Unfavorable harvest conditions, reduced crop area, and pest losses have affected the production outlook.

o Soviet Union

Production is estimated at 5.3 million tons, down 0.2 million or 3 percent from last month and down 0.1 million or 1 percent from last year. The U.S. agricultural counselor in Moscow reported a reduction in raw cotton output based on official statistics.

- \* **Peanuts:** World production for 1990/91 is forecast at 21.4 million tons, down marginally from last month and down 0.5 million or 2 percent from 1989/90. Total foreign production is estimated at 19.8 million tons, down marginally from last month and down 0.3 million or 1 percent from 1989/90. U.S. peanut production was unchanged this month, remaining at 1.6 million tons, down 0.2 million or 10 percent from last year. There were no significant country changes this month.
- \* **Sunflowerseed:** World production for 1990/91 is forecast at 21.5 million tons, down 0.3 million or 1 percent from last month and down 0.4 million or 2 percent from last year. Total foreign production is estimated at 20.5 million tons, down 0.3 million or 1 percent from last month and down 0.7 million or 3 percent from last year. Country highlights are as follows:

o United States

There was no change in the USDA official estimate by the National Agricultural Statistics Service this month. Production is estimated at 1.0 million tons, up 0.2 million or 29 percent from last year.

o Soviet Union

Production is estimated at 6.5 million tons, down 0.3 million or 4 percent from last month and down 0.6 million or 8 percent from last year. Official reports confirm that yields were adversely affected by the poor harvesting conditions in November.

- \* **Rapeseed:** World production for 1990/91 is forecast at a record 24.6 million tons, up 0.8 million or 3 percent from last month and up 2.7 million or 12 percent from last year. Country highlights are as follows:

o India

Production is estimated at a record 4.8 million tons, up 0.8 million or 20 percent from last month, and up 0.7 million or 26 percent from last year. Harvested rapeseed area is expected to reach a record 5.2 million hectares, up 4 percent from last year.

- \* **Flaxseed**: World production for 1990/91 is forecast at 2.3 million tons, down marginally from last month, but up 0.5 million or 26 percent from last year. While production by the United States is small, this year's estimated output increased by 213 percent over last year, to 97,000 tons. Total foreign production is pegged at 2.2 million tons, down marginally from last month, but up 0.4 million or 23 percent from last year. There were no significant country changes this month.
- \* **Copra**: World production for 1990/91 is forecast at 4.9 million tons, up marginally from last month and up 0.1 million or 3 percent from last year. Copra production reached a record 5.3 million in 1985/86. There were no significant country changes this month.
- \* **Palm Kernels**: World production for 1990/91 is forecast at a record 3.4 million tons, unchanged from last month, but up nearly 2 percent from last year. There were no country changes this month.
- \* **Palm Oil**: World production for 1990/91 is forecast at a record 11.0 million tons, down 0.2 million from last month, but up 71,000 tons from last year. Country highlights are as follows:

o **Malaysia**

Production is estimated at 6.2 million tons, down 0.2 million or 3 percent from last month and down 3 percent from last year. Tree-stress from an earlier dry period is expected to reduce production, particularly during the first half of the October-September marketing year.

**COTTON**: World cotton production in 1990/91 is estimated at 86.1 million bales, down 0.8 million or 1 percent from last month but up 6.1 million or 8 percent from last year. United States production is estimated at 15.6 million bales, unchanged from last month. Foreign production is estimated at 70.4 million bales, down 0.8 million from last month but up 2.6 million or 4 percent from the 1989/90 estimate. Country highlights are as follows:

o **India**

Production is estimated at 9.8 million bales, down 0.3 million or 3 percent from last month, and down 6 percent from last year's record crop. Cotton yields are forecast slightly lower due to pest and weather related damage.

o **USSR**

Production is estimated at 12.0 million bales, down 0.4 million or 3 percent from last month, and down 3 percent from last year. The reduction is attributed to recently released Soviet statistics.

o **Peru**

Production is estimated at 0.3 million bales, down 0.1 million from last month or 27 percent from last month. Area planted of both Tanguis and extra-long-staple cotton is forecast lower. This is a result of a sharp drop in available credit this season and the low prices paid for last season.

TABLE 1

## U.S. Crop Acreage, Yield, and Production 1/

COMMODITY	PLANTED AREA			HARVESTED AREA			YIELD			PRODUCTION				
	Prel.	Proj.	1988/89	1989/90	1990/91	1988/89	1989/90	1990/91	Prel.	1990/91 Proj.	1988/89	1989/90	Prel.	1990/91 Proj.
--Million Acres--														
All Wheat	65.5	76.6	77.3	53.2	62.2	69.4	34.1	32.7	39.5	39.5	1,812	2,037	2,739	2,739
Winter	48.8	55.1	57.0	39.8	41.5	50.0	39.2	35.0	40.7	40.7	1,562	1,455	2,033	2,033
Other	16.7	21.5	20.3	13.4	20.7	19.4	18.7	28.1	36.4	36.4	250	582	705	705
Rye	2.4	2.0	1.6	0.6	0.5	0.4	24.7	28.2	27.1	27.1	15	14	10	10
--Bushels per Acre--														
Soybeans	58.8	60.8	57.8	57.4	59.5	56.5	27.0	32.3	34.0	34.0	1,549	1,924	1,922	1,922
Corn	67.7	72.2	74.2	58.3	64.7	67.0	84.6	116.3	118.5	118.5	4,929	7,525	7,933	7,933
Sorghum	10.3	12.6	10.5	9.0	11.1	9.1	63.8	55.4	62.9	62.9	577	615	571	571
Barley	9.8	9.1	8.2	7.6	8.3	7.5	38.0	48.6	55.9	55.9	290	404	419	419
Oats	13.9	12.1	10.4	5.5	6.9	5.9	39.3	54.3	60.1	60.1	218	374	357	357
--Pounds per Acre--														
Rice	2.9	2.7	2.9	2.9	2.7	2.8	5,514	5,749	5,507	5,507	159.9	154.5	154.9	154.9
All Cotton	12.5	10.6	12.4	11.9	9.5	11.7	619	614	640	640	15.4	12.2	15.6	15.6
---Million CWT---														

1/ Source: All estimates are provided by the National Agricultural Statistics Service (NASS) of the United States Department of Agriculture, and are published in the Crop Production circular available from NASS.

FEBRUARY 1991

Production Estimates and Crop Assessment Division, FAS, USDA

TABLE 2

## World Crop Production Summary

Commodity	World	Total Foreign	North America			Europe			Asia			South America			Selected Other		All Other Countries
			United States	Canada	Mexico	EC-12	Oth. W. Europe	Eastern Europe	USSR	China	India	Indonesia	Pakistan	Thailand	Argentina	Australia	Turkey
—Million Metric Tons—																	
<u>Wheat</u>																	
1988/89	500.4	451.1	49.3	16.0	3.2	74.7	3.8	44.8	84.4	85.4	46.2	0.0	12.7	0.0	8.4	5.8	15.0
1989/90 prel.	536.8	481.4	55.4	24.6	4.0	78.3	4.4	44.3	92.3	90.8	54.1	0.0	14.4	0.0	10.2	5.6	11.5
1990/91 proj.	518.7	74.5	31.8	3.9	80.7	5.0	44.7	108.0	96.5	54.0	0.0	14.3	0.0	11.2	3.2	15.5	2.0
January	593.3	514.5	74.5	31.8	3.9	80.6	5.0	44.7	108.0	96.5	49.7	0.0	14.3	0.0	11.2	3.2	17.4
February	589.0	514.5	74.5	31.8	3.9	80.6	5.0	44.7	108.0	96.5	49.7	0.0	14.3	0.0	11.2	3.2	17.4
<u>Coarse Grains</u>																	
1988/89	731.2	581.5	149.7	19.7	13.8	88.1	11.4	61.3	97.5	94.2	31.3	5.2	2.4	4.4	7.3	26.7	6.7
1989/90 prel.	803.5	582.2	221.4	23.5	14.1	82.1	12.4	68.1	104.8	94.6	34.6	5.0	2.8	4.2	8.3	22.7	6.9
1990/91 proj.	824.0	593.4	230.6	26.0	16.3	76.9	13.3	61.4	114.0	104.7	32.3	5.3	2.9	4.0	9.8	25.9	6.9
January	824.0	593.4	230.6	26.0	16.3	76.8	13.3	61.4	114.0	104.7	35.0	5.3	2.9	4.0	9.8	24.9	6.8
February	825.8	595.3	230.6	26.0	16.3	76.8	13.3	61.4	114.0	104.7	35.0	5.3	2.9	4.0	9.8	24.9	6.8
<u>Rice (Milled)</u>																	
1988/89	330.8	325.6	5.2	0.0	0.3	1.3	0.0	0.2	1.9	118.4	70.5	27.5	3.2	14.0	0.3	7.5	0.6
1989/90 prel.	344.5	339.4	5.1	0.0	0.4	1.4	0.0	0.2	1.7	126.1	74.1	29.1	3.2	13.7	0.2	5.0	0.7
1990/91 proj.	348.2	343.3	4.9	0.0	0.3	1.6	0.0	0.2	1.7	129.5	73.0	29.2	3.5	12.9	0.3	6.7	0.5
January	348.2	343.3	4.9	0.0	0.3	1.6	0.0	0.2	1.7	129.5	75.0	29.2	3.5	12.0	0.3	6.7	0.5
February	349.9	345.0	4.9	0.0	0.3	1.6	0.0	0.2	1.7	129.5	75.0	29.2	3.5	12.0	0.3	6.7	0.5
<u>Total Grains 1/</u>																	
1988/89	1,562.4	1,358.2	204.2	35.7	17.2	164.1	15.2	106.2	183.8	298.0	148.0	32.7	18.2	18.5	16.0	40.0	21.4
1989/90 prel.	1,684.8	1,402.9	281.9	48.0	18.5	161.8	16.7	112.6	198.8	311.5	162.7	34.1	20.4	17.9	18.7	33.3	21.7
1990/91 proj.	1,765.4	1,455.4	310.0	57.8	20.4	159.1	18.3	106.3	223.7	330.7	159.3	34.5	20.7	16.9	21.3	35.8	22.9
January	1,764.8	1,454.8	310.0	57.8	20.4	159.0	18.3	106.3	223.7	330.7	159.6	34.5	20.7	16.0	21.3	34.8	23.0
February																	
<u>Oilseeds 2/</u>																	
1988/89	203.6	153.3	50.3	5.9	1.0	11.5	0.6	5.1	13.3	30.6	19.3	2.0	3.2	0.8	10.7	24.6	0.8
1989/90 prel.	213.9	154.7	59.2	4.9	1.4	11.0	0.7	6.0	14.0	28.4	19.4	2.0	3.3	0.9	15.9	21.4	2.4
1990/91 proj.	217.1	156.6	60.6	5.7	0.9	12.3	0.8	5.2	13.8	32.2	18.7	2.1	3.4	0.7	15.1	19.5	0.9
January	216.9	156.4	60.6	5.7	0.9	12.3	0.8	5.2	13.4	32.2	19.5	2.1	3.4	0.7	15.1	19.0	1.0
February																	
<u>Cotton</u>																	
1988/89	84.7	69.3	15.4	0.0	1.4	1.6	0.0	0.1	12.7	19.1	8.3	0.0	6.5	0.2	0.9	3.4	1.3
1989/90 prel.	80.0	67.8	12.2	0.0	0.8	1.5	0.0	0.1	12.3	17.4	10.4	0.0	6.7	0.2	1.3	3.0	1.4
1990/91 proj.	86.9	71.3	15.6	0.0	0.8	1.5	0.0	0.1	12.4	19.3	10.1	0.0	7.0	0.2	1.4	3.4	1.6
January	86.1	70.4	15.6	0.0	0.8	1.5	0.0	0.1	12.0	19.3	9.8	0.0	7.0	0.2	1.4	3.4	1.6
February																3.0	10.4
																3.0	10.3
—Million 480-Pound Bales—																	

1/ Includes total of wheat, coarse grains, and rice (milled) shown above. Estimates of Soviet total grain production, including wheat, coarse grains, rice (rough), minor grains and pulses are 195.1 million tons in 1988/89, 210.9 million in 1989/90, and 235.0 million forecast in 1990/91.

2/ Totals for major regions and countries include the six major oilseeds shown elsewhere in this report, while world and total foreign also include copra and palm kernels for all countries.

Note: Entries of 0.0 indicate no reported or insignificant production.

TABLE 3

**Wheat Area, Yield, and Production  
World and Selected Countries and Regions**

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	Prel. 1988/89	Proj. 1989/90	Proj. 1990/91	Prel. 1988/89	1989/90	1990/91 Jan.	Proj. Feb.	Prel. 1988/89	1989/90	1990/91 Jan.	Proj. Feb.
	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
World	218.0	225.6	230.8	2.30	2.38	2.57	2.55	500.4	536.8	593.3	589.0
United States	21.5	25.2	28.1	2.29	2.20	2.66	2.66	49.3	55.4	74.5	74.5
Total Foreign	196.5	200.4	202.8	2.30	2.40	2.56	2.54	451.1	481.4	518.7	514.5
Maj. Foreign Exporters	42.1	44.3	45.6	2.69	2.87	3.05	3.06	113.1	127.2	139.2	139.3
Argentina	4.7	5.5	5.9	1.79	1.86	1.90	1.90	8.4	10.2	11.2	11.2
Australia	8.9	8.9	9.9	1.58	1.58	1.57	1.59	14.1	14.1	15.5	15.7
Canada	13.0	13.6	14.1	1.23	1.80	2.26	2.26	16.0	24.6	31.8	31.8
EC-12	15.5	16.3	15.7	4.82	4.82	5.12	5.12	74.7	78.3	80.7	80.6
Major Importers	95.9	97.2	97.9	2.39	2.50	2.69	2.69	229.3	242.5	263.1	263.1
Brazil	3.5	3.4	3.3	1.68	1.65	0.97	0.97	5.8	5.6	3.2	3.2
China	28.8	29.8	30.3	2.97	3.04	3.18	3.18	85.4	90.8	96.5	96.5
Eastern Europe	10.7	10.6	10.6	4.17	4.16	4.20	4.20	44.8	44.3	44.7	44.7
Egypt	0.6	0.6	0.7	4.76	5.05	5.71	5.71	2.8	3.2	4.0	4.0
Other N. Africa 1/	4.0	4.7	5.2	1.26	1.13	1.08	1.08	5.0	5.3	5.6	5.6
Japan	0.3	0.3	0.3	3.62	3.43	3.77	3.77	1.0	1.0	1.0	1.0
USSR	48.1	47.7	47.5	1.76	1.94	2.27	2.27	84.4	92.3	108.0	108.0
Other Foreign	58.5	59.0	59.3	1.86	1.90	1.96	1.89	108.6	111.8	116.5	112.1
India	23.1	24.1	23.5	2.00	2.24	2.28	2.12	46.2	54.1	54.0	49.7
Iran	6.6	6.0	6.1	1.11	0.97	1.00	1.00	7.3	5.8	6.1	6.1
Mexico	0.8	1.0	0.9	4.00	4.21	4.59	4.59	3.2	4.0	3.9	3.9
Non-EC W. Europe	0.8	0.8	0.9	4.85	5.19	5.46	5.46	3.8	4.4	5.0	5.0
Pakistan	7.3	7.7	7.8	1.73	1.87	1.84	1.84	12.7	14.4	14.3	14.3
South Africa	2.0	1.8	1.7	1.78	1.11	1.06	1.05	3.5	2.0	1.8	1.8
Turkey	8.8	8.7	8.8	1.71	1.32	1.60	1.60	15.0	11.5	14.0	14.0
Others	9.3	8.8	9.7	1.83	1.76	1.79	1.79	17.0	15.5	17.4	17.4

1/ Algeria, Libya, Morocco, and Tunisia.

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**TABLE 4**  
**Coarse Grains Area, Yield, and Production**  
**World and Selected Countries and Regions**

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	Prel. 1988/89	Proj. 1989/90	Proj. 1990/91	Prel. 1988/89	1989/90	1990/91 Jan.	Proj. Feb.	Prel. 1988/89	1989/90	1990/91 Jan.	1990/91 Feb.
<b>TOTAL COARSE GRAINS</b>	<b>---Million Hectares---</b>			<b>---Metric Tons Per Hectare---</b>				<b>---Million Metric Tons---</b>			
World 1/	325.9	322.0	321.5	2.24	2.50	2.56	2.57	731.2	803.5	824.0	825.8
United States	32.8	37.0	36.4	4.56	5.98	6.34	6.34	149.7	221.4	230.6	230.6
Total Foreign	293.1	285.0	285.1	1.98	2.04	2.08	2.09	581.5	582.2	593.4	595.3
Maj. Foreign Exporters	20.7	21.4	20.8	2.47	2.48	2.56	2.57	51.1	53.2	53.6	53.4
Argentina	2.9	3.1	3.4	2.49	2.65	2.90	2.90	7.3	8.3	9.8	9.8
Australia	4.3	4.0	4.2	1.56	1.71	1.58	1.60	6.7	6.9	6.9	6.8
Canada	7.1	8.3	8.0	2.76	2.84	3.24	3.24	19.7	23.5	26.0	26.0
South Africa	4.6	4.4	3.6	2.86	2.32	1.88	1.88	13.0	10.3	6.8	6.8
Thailand	1.8	1.6	1.5	2.50	2.71	2.67	2.67	4.4	4.2	4.0	4.0
Major Importers	106.3	103.7	101.4	2.57	2.73	2.79	2.79	273.4	282.8	283.3	283.2
Eastern Europe	18.2	18.1	18.0	3.37	3.76	3.42	3.42	61.3	68.1	61.4	61.4
EC-12	19.2	18.6	17.7	4.60	4.42	4.35	4.35	88.1	82.1	76.9	76.8
Other W. Europe	3.2	3.1	3.0	3.52	3.97	4.40	4.40	11.4	12.4	13.3	13.3
Mexico	7.5	7.5	8.3	1.85	1.88	1.96	1.96	13.8	14.1	16.3	16.3
USSR	57.8	56.0	54.0	1.69	1.87	2.11	2.11	97.5	104.8	114.0	114.0
Other Major Import. 2/	0.5	0.4	0.4	3.40	3.34	3.32	3.32	1.5	1.4	1.4	1.4
Other Foreign	166.0	159.9	163.0	1.55	1.54	1.57	1.59	256.9	246.1	256.5	258.7
Brazil	13.4	12.7	13.6	2.00	1.80	1.91	1.84	26.7	22.7	25.9	24.9
China	28.3	28.5	29.2	3.33	3.32	3.59	3.59	94.2	94.6	104.7	104.7
India	38.7	37.7	38.9	0.81	0.92	0.82	0.90	31.3	34.6	32.3	35.0
Indonesia	2.9	2.7	2.9	1.82	1.85	1.83	1.83	5.2	5.0	5.3	5.3
Nigeria	10.1	9.9	9.7	0.84	0.82	0.78	0.78	8.5	8.1	7.6	7.6
Philippines	3.8	3.6	3.8	1.21	1.24	1.24	1.24	4.5	4.5	4.6	4.7
Turkey	4.4	4.4	4.5	2.29	1.70	1.99	1.99	10.0	7.5	8.9	8.9
Others	64.6	60.3	60.5	1.18	1.15	1.11	1.12	76.5	69.1	67.2	67.6
<b>BARLEY</b>											
World	78.2	74.9	73.9	2.15	2.26	2.45	2.45	167.8	169.5	181.6	181.4
United States	3.1	3.4	3.0	2.04	2.62	3.00	3.00	6.3	8.8	9.1	9.1
Total Foreign	75.1	71.5	70.9	2.15	2.25	2.43	2.43	161.5	160.7	172.5	172.3
Australia	2.2	2.4	2.5	1.48	1.73	1.55	1.59	3.3	4.1	3.9	4.0
Canada	4.2	4.7	4.6	2.46	2.50	2.93	2.93	10.2	11.7	13.5	13.5
China	3.7	3.3	3.3	1.67	1.74	1.73	1.73	6.2	5.7	5.7	5.7
Eastern Europe	4.5	4.5	4.5	3.77	4.31	4.33	4.33	17.1	19.3	19.5	19.5
EC-12	12.2	11.8	11.4	4.13	3.93	4.02	4.03	50.2	46.2	46.0	46.0
Other W. Europe	1.7	1.5	1.5	3.28	3.87	4.26	4.26	5.7	5.9	6.2	6.2
Turkey	3.3	3.4	3.4	2.12	1.46	1.76	1.76	7.0	4.9	6.0	6.0
USSR	29.7	27.6	26.0	1.50	1.75	2.19	2.19	44.5	48.5	57.0	57.0
Others	13.5	12.5	13.7	1.28	1.16	1.06	1.05	17.3	14.5	14.7	14.4

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Production Estimates and Crop Assessment Division, FAS, USDA

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TABLE 4 (Continued)  
**Coarse Grains Area, Yield, and Production**  
**World and Selected Countries and Regions**

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	Prel. 1988/89	Proj. 1989/90	Proj. 1990/91	Prel. 1988/89	1989/90	1990/91 Jan.	Proj. Feb.	Prel. 1988/89	1989/90	1990/91 Jan.	Proj. Feb.
<b>CORN</b>	<b>---Million Hectares---</b>			<b>---Metric Tons Per Hectare---</b>				<b>---Million Metric Tons---</b>			
World	125.2	126.2	127.7	3.20	3.67	3.68	3.69	400.8	462.9	469.8	470.6
United States	23.6	26.2	27.1	5.31	7.30	7.44	7.44	125.2	191.2	201.5	201.5
Total Foreign	101.6	100.0	100.6	2.71	2.72	2.67	2.68	275.6	271.7	268.3	269.1
Maj. Foreign Exporters	7.1	6.7	6.1	3.05	2.78	2.70	2.70	21.6	18.6	16.5	16.5
Argentina	1.7	1.7	2.0	2.94	3.06	3.40	3.40	5.0	5.2	6.8	6.8
South Africa	3.8	3.6	2.8	3.28	2.62	2.14	2.14	12.4	9.4	6.0	6.0
Thailand	1.6	1.4	1.3	2.63	2.86	2.85	2.85	4.2	4.0	3.7	3.7
Major Importers	22.0	21.2	21.2	3.82	3.96	3.41	3.41	83.9	83.9	72.3	72.2
Eastern Europe	7.1	7.1	6.8	3.78	4.21	3.31	3.31	26.9	29.8	22.6	22.6
EC-12	4.1	3.9	3.4	7.00	6.93	6.30	6.26	28.5	26.9	21.7	21.5
Other W. Europe	0.2	0.2	0.2	8.55	7.68	7.43	7.43	1.9	1.7	1.6	1.6
Mexico	6.0	5.8	6.6	1.68	1.68	1.82	1.82	10.1	9.8	12.0	12.0
USSR	4.4	4.1	4.0	3.62	3.71	3.50	3.50	16.0	15.3	14.0	14.0
Other Maj. Import. 2/	0.1	0.1	0.1	4.20	4.19	4.14	4.14	0.4	0.5	0.5	0.5
Other Foreign	72.6	72.1	73.3	2.34	2.35	2.45	2.46	170.1	169.3	179.5	180.4
Brazil	12.9	12.1	13.0	2.02	1.80	1.92	1.85	26.1	21.8	25.0	24.0
Canada	1.0	1.0	1.0	5.47	6.36	7.00	7.00	5.4	6.4	7.0	7.0
China	19.7	20.4	21.0	3.93	3.88	4.19	4.19	77.4	78.9	88.0	88.0
Egypt	0.8	0.8	0.9	5.20	5.37	5.41	5.41	4.3	4.5	4.6	4.6
India	5.9	5.9	5.9	1.40	1.61	1.33	1.61	8.2	9.4	8.0	9.5
Indonesia	2.9	2.7	2.9	1.82	1.85	1.83	1.83	5.2	5.0	5.3	5.3
Philippines	3.8	3.6	3.8	1.21	1.24	1.24	1.24	4.5	4.5	4.6	4.7
Zimbabwe	1.2	1.2	1.2	1.56	1.67	1.74	1.74	1.9	2.0	2.0	2.0
Others	24.4	24.5	23.7	1.52	1.50	1.48	1.49	37.1	36.7	35.0	35.3
<b>SORGHUM</b>											
World	42.3	41.4	40.3	1.30	1.36	1.33	1.36	55.2	56.3	53.9	54.6
United States	3.7	4.5	3.7	4.00	3.48	3.95	3.95	14.6	15.6	14.5	14.5
Total Foreign	38.6	36.9	36.6	1.05	1.10	1.06	1.10	40.5	40.7	39.4	40.1
Argentina	0.6	0.7	0.7	2.33	2.86	3.00	3.00	1.4	2.0	2.1	2.1
Australia	0.6	0.4	0.5	1.99	2.27	2.00	2.00	1.3	0.9	1.2	0.9
China	1.8	1.8	1.8	3.14	2.94	3.22	3.22	5.6	5.4	5.8	5.8
India	14.6	14.9	15.0	0.70	0.86	0.75	0.83	10.2	12.9	11.5	12.5
Mexico	1.1	1.3	1.3	2.83	2.88	2.85	2.85	3.1	3.8	3.7	3.7
Nigeria	4.4	4.4	4.4	0.80	0.80	0.75	0.75	3.5	3.5	3.3	3.3
South Africa	0.3	0.3	0.3	1.58	1.65	1.65	1.65	0.4	0.5	0.5	0.5
Sudan	5.3	3.1	3.0	0.83	0.52	0.50	0.50	4.4	1.6	1.5	1.5
Thailand	0.2	0.2	0.2	1.35	1.44	1.39	1.39	0.2	0.2	0.3	0.3
Others	9.8	9.7	9.4	1.07	1.02	1.01	1.01	10.4	9.9	9.6	9.5

FOOTNOTES AT END OF TABLE

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Production Estimates and Crop Assessment Division, FAS, USDA

TABLE 4 (Continued)  
**Coarse Grains Area, Yield, and Production**  
**World and Selected Countries and Regions**

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	Prel. 1988/89	Proj. 1989/90	Proj. 1990/91	Prel. 1988/89	1989/90	1990/91 Jan.	1990/91 Feb.	Prel. 1988/89	1989/90	1990/91 Jan.	1990/91 Feb.
<b>OATS</b>	<b>---Million Hectares---</b>			<b>---Metric Tons Per Hectare---</b>				<b>---Million Metric Tons---</b>			
World	22.1	22.7	21.6	1.70	1.84	1.98	1.99	37.5	41.7	42.9	42.9
United States	2.2	2.8	2.4	1.41	1.95	2.16	2.16	3.2	5.4	5.2	5.2
Total Foreign	19.9	19.9	19.2	1.73	1.83	1.96	1.96	34.3	36.3	37.7	37.7
USSR	10.9	10.8	10.5	1.40	1.57	1.67	1.67	15.3	16.8	17.5	17.5
Maj. Foreign Exporters	3.5	3.7	3.5	1.91	1.97	2.11	2.12	6.6	7.3	7.3	7.4
Argentina	0.4	0.4	0.5	1.27	1.44	1.33	1.33	0.5	0.6	0.6	0.6
Australia	1.3	1.1	1.2	1.40	1.44	1.38	1.42	1.9	1.6	1.6	1.7
Canada	1.4	1.7	1.5	2.18	2.08	2.33	2.33	3.0	3.5	3.5	3.5
Sweden	0.4	0.4	0.4	3.14	3.54	4.51	4.51	1.3	1.5	1.6	1.6
Other Foreign	5.4	5.4	5.2	2.28	2.24	2.46	2.45	12.4	12.2	12.9	12.9
China	0.6	0.6	0.6	1.19	1.15	1.21	1.21	0.7	0.6	0.7	0.7
Eastern Europe	1.4	1.4	1.3	2.62	2.66	2.87	2.87	3.7	3.6	3.7	3.7
East Germany	0.1	0.1	0.1	3.43	3.33	4.14	4.14	0.5	0.5	0.6	0.6
Poland	0.9	0.8	0.7	2.61	2.72	2.78	2.78	2.2	2.2	2.1	2.1
EC-12	1.8	1.7	1.6	3.11	2.78	3.10	3.09	5.5	4.7	4.9	4.9
France	0.3	0.3	0.2	3.77	3.78	3.80	3.80	1.0	1.0	0.9	0.9
West Germany	0.6	0.5	0.5	4.23	3.78	4.37	4.37	2.4	1.9	2.1	2.1
Finland	0.4	0.4	0.5	2.21	3.24	3.67	3.67	0.9	1.4	1.7	1.7
Norway	0.1	0.1	0.1	3.02	3.13	4.58	4.58	0.4	0.4	0.6	0.6
Others	1.2	1.3	1.2	1.09	1.10	1.11	1.11	1.3	1.4	1.4	1.4
<b>RYE</b>											
World	15.9	16.9	16.8	2.08	2.22	2.31	2.31	33.0	37.6	38.8	38.8
United States	0.2	0.2	0.2	1.55	1.77	1.70	1.70	0.4	0.3	0.3	0.3
Total Foreign	15.6	16.7	16.6	2.09	2.23	2.32	2.32	32.6	37.3	38.6	38.6
USSR	10.1	10.7	10.5	1.83	1.87	2.00	2.00	18.5	20.1	21.0	21.0
Maj. Foreign Exporter											
Canada	0.3	0.5	0.5	1.04	1.74	1.74	1.74	0.3	0.9	0.9	0.9
Other Foreign											
Eastern Europe	3.9	3.9	4.1	2.59	2.99	2.91	2.91	10.0	11.8	11.9	11.9
East Germany	0.6	0.6	0.6	2.94	3.34	3.19	3.19	1.8	2.1	2.1	2.1
Poland	2.9	2.9	3.1	2.52	2.95	2.84	2.84	7.2	8.6	8.7	8.7
Czechoslovakia	0.2	0.2	0.2	3.42	4.05	4.26	4.26	0.5	0.7	0.7	0.7
EC-12	0.9	1.0	1.0	3.05	3.31	3.46	3.46	2.9	3.2	3.3	3.3
Denmark	0.1	0.1	0.1	4.52	4.80	4.90	4.90	0.4	0.5	0.5	0.5
West Germany	0.4	0.4	0.4	4.19	4.69	4.72	4.72	1.6	1.8	2.0	2.0
Others	0.5	0.6	0.6	2.06	2.28	2.51	2.51	1.0	1.3	1.4	1.4

1/ Total of barley, corn, sorghum, oats, and rye shown below, plus millet and mixed grain.

2/ Japan, Republic of Korea, and Taiwan.

TABLE 5

**Rice Area, Yield, and Production  
World and Selected Countries and Regions**

	AREA		YIELD		PRODUCTION (Rough Basis)		MILLING RATE		PRODUCTION (Milled Basis)		
	Prel.	Proj.	Prel.	1990/91 Proj.	Prel.	1990/91 Proj.	Prel.	1990/91 Proj.	Prel.	1990/91 Proj.	
	1988/89	1989/90	1990/91	1988/89	1989/90	1988/89	1989/90	Jan.	Feb.	1988/89	1989/90
	<b>—Million Hectares—</b>		<b>—Metric Tons Per Hectare—</b>					<b>—In Percent—</b>			
World	145.5	146.8	146.4	3.4	3.5	3.5	488.7	508.8	514.5	517.1	67.7
United States	1.2	1.1	1.1	6.2	6.4	6.2	7.3	7.0	7.0	7.0	70.0
Total Foreign	144.3	145.7	145.3	3.3	3.4	3.5	481.4	501.8	507.4	510.0	67.6
Maj. Foreign Exporters	16.5	17.0	16.7	2.3	2.3	2.2	38.6	39.1	38.8	37.4	64.1
Burma	4.5	4.7	4.9	2.8	2.9	2.9	12.5	13.5	14.0	14.0	60.0
Pakistan	2.0	2.1	2.1	2.4	2.3	2.5	4.8	4.8	5.3	5.3	66.7
Thailand	9.9	10.2	9.7	2.1	2.0	2.0	1.9	21.3	20.8	19.5	18.2
Major Importers	13.0	13.8	13.6	4.3	4.2	4.3	55.8	58.3	58.4	58.4	66.1
EC-12	0.3	0.3	0.4	5.6	6.2	6.3	6.3	2.0	2.1	2.3	67.3
Indonesia	9.8	10.5	10.3	4.3	4.2	4.4	42.3	44.7	45.0	45.0	65.0
Nigeria	0.6	0.6	0.7	1.3	1.4	1.4	0.8	0.9	0.9	0.9	60.0
Republic of Korea	1.3	1.3	1.2	6.6	6.5	6.3	8.4	8.2	7.8	7.8	72.3
Other Maj. Import. 1/	1.0	1.0	1.0	2.3	2.4	2.4	2.3	2.5	2.4	2.4	65.4
Other Foreign	114.8	114.8	115.0	3.4	3.5	3.6	387.1	404.4	410.3	414.2	68.2
Australia	0.1	0.1	0.1	8.2	8.0	8.2	0.8	0.8	0.9	0.7	71.5
Bangladesh	10.2	10.5	10.6	2.3	2.6	2.5	23.3	27.0	27.0	27.2	66.7
Brazil	5.3	4.2	4.8	2.1	1.8	2.0	11.0	7.4	9.8	9.8	68.0
China	31.9	32.7	32.4	5.3	5.5	5.7	169.1	180.1	185.0	185.0	70.0
India	41.7	42.2	42.2	2.5	2.6	2.6	105.7	111.1	109.5	112.5	66.7
Japan	2.1	2.1	2.1	5.9	6.2	6.4	12.4	12.9	13.2	13.2	72.8
Philippines	3.5	3.4	3.5	2.6	2.6	2.7	9.2	8.9	9.4	9.4	65.0
USSR	0.7	0.7	0.7	4.3	3.9	4.0	4.0	2.9	2.6	2.6	65.0
Vietnam	5.8	5.9	5.9	2.9	3.1	3.1	16.8	18.4	18.0	18.0	65.0
Others	13.5	13.1	12.9	2.6	2.7	2.8	35.8	35.0	35.8	35.8	66.2

1/ Hong Kong, Iran, Iraq, Ivory Coast, and Saudi Arabia.

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Production Estimates and Crop Assessment Division, FAS, USDA

**TABLE 6**  
**Oilseeds Area, Yield, and Production**  
**World and Selected Countries and Regions**

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	Prel. 1988/89	Proj. 1989/90	Proj. 1990/91	Prel. 1988/89	1989/90	1990/91 Jan.	Feb.	Prel. 1988/89	1989/90	1990/91 Jan.	Feb.
<b><u>SOYBEANS</u></b>	<b>---Million Hectares---</b>			<b>---Metric Tons Per Hectare---</b>				<b>---Million Metric Tons---</b>			
World	55.87	58.03	54.76	1.71	1.84	1.92	1.92	95.55	106.79	105.49	105.07
United States	23.22	24.09	22.87	1.82	2.17	2.29	2.29	42.15	52.35	52.30	52.30
Total Foreign	32.65	33.94	31.89	1.64	1.60	1.66	1.65	53.40	54.44	53.18	52.77
Maj. Foreign Exporters	16.17	16.35	14.80	1.84	1.88	1.87	1.88	29.70	30.75	28.30	27.80
Argentina	4.00	4.95	4.90	1.63	2.17	2.10	2.10	6.50	10.75	10.30	10.30
Brazil	12.17	11.40	9.90	1.91	1.75	1.76	1.77	23.20	20.00	18.00	17.50
Other Foreign	16.48	17.59	17.09	1.44	1.35	1.46	1.46	23.70	23.69	24.88	24.97
Canada	0.53	0.54	0.50	2.16	2.26	2.63	2.63	1.15	1.22	1.33	1.33
China	8.12	8.06	7.63	1.43	1.27	1.51	1.51	11.65	10.23	11.50	11.50
Eastern Europe	0.56	0.54	0.54	1.20	1.51	1.31	1.31	0.67	0.82	0.71	0.71
EC-12	0.53	0.61	0.66	3.10	3.19	2.82	2.82	1.66	1.95	1.85	1.85
India	1.73	2.13	2.20	0.89	0.80	0.95	0.95	1.55	1.72	2.00	2.10
Indonesia	1.18	1.15	1.25	1.02	0.96	0.96	0.96	1.20	1.10	1.20	1.20
Paraguay	0.85	0.98	0.98	1.90	1.53	1.63	1.63	1.62	1.50	1.60	1.60
USSR	0.76	0.83	0.84	1.16	1.15	1.10	1.10	0.88	0.96	0.92	0.92
Others	2.21	2.74	2.49	1.51	1.53	1.51	1.51	3.33	4.20	3.77	3.76
<b><u>COTTONSEED</u></b>											
World	33.76	32.42	33.97	0.98	0.97	1.00	0.99	32.96	31.41	33.99	33.67
United States	4.84	3.86	4.74	1.14	1.10	1.17	1.17	5.50	4.24	5.52	5.52
Total Foreign	28.92	28.56	29.23	0.95	0.95	0.97	0.96	27.46	27.17	28.47	28.15
China	5.53	5.20	5.50	1.27	1.24	1.30	1.30	7.05	6.46	7.14	7.14
India	7.34	7.33	7.70	0.49	0.62	0.57	0.55	3.60	4.54	4.42	4.27
Pakistan	2.51	2.60	2.74	1.14	1.12	1.13	1.12	2.85	2.91	3.06	3.06
USSR	3.43	3.34	3.15	1.61	1.59	1.71	1.67	5.54	5.32	5.40	5.25
Others	10.11	10.09	10.14	0.83	0.79	0.83	0.83	8.42	7.94	8.45	8.43
<b><u>PEANUTS</u></b>											
World	19.81	19.65	19.46	1.17	1.11	1.11	1.10	23.18	21.90	21.43	21.42
United States	0.66	0.67	0.73	2.74	2.72	2.24	2.24	1.81	1.81	1.63	1.63
Total Foreign	19.15	18.99	18.73	1.12	1.06	1.07	1.06	21.37	20.09	19.79	19.79
Argentina	0.15	0.18	0.19	1.62	2.06	2.32	2.32	0.24	0.37	0.43	0.43
China	2.91	2.96	3.05	1.95	1.79	1.90	1.90	5.69	5.30	5.80	5.80
India	8.53	8.71	8.10	1.06	0.93	0.92	0.90	9.00	8.09	7.30	7.30
Senegal	0.90	0.78	0.92	0.76	1.04	0.73	0.73	0.69	0.82	0.67	0.67
South Africa	0.15	0.09	0.08	1.07	1.35	1.25	1.25	0.16	0.12	0.10	0.10
Sudan	0.58	0.55	0.54	0.78	0.73	0.60	0.60	0.45	0.40	0.33	0.33
Others	5.92	5.72	5.86	0.87	0.87	0.88	0.88	5.13	5.00	5.17	5.17

CONTINUED

TABLE 6 (Continued)  
**Oilseeds Area, Yield, and Production**  
**World and Selected Countries and Regions**

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	Prel. 1988/89	Proj. 1989/90	1990/91	Prel. 1988/89	1989/90	1990/91 Proj. Jan. Feb.	Prel. 1988/89	1989/90	1990/91 Proj. Jan. Feb.		
<b>SUNFLOWERSEED</b>	<b>---Million Hectares---</b>			<b>---Metric Tons Per Hectare---</b>				<b>---Million Metric Tons---</b>			
World	14.95	15.94	16.16	1.36	1.38	1.36	1.33	20.37	21.98	21.82	21.55
United States	0.78	0.72	0.75	1.05	1.10	1.38	1.38	0.81	0.80	1.03	1.03
Total Foreign	14.18	15.22	15.41	1.38	1.39	1.36	1.33	19.56	21.19	20.78	20.51
Argentina	2.20	2.80	2.40	1.45	1.36	1.42	1.42	3.20	3.80	3.40	3.40
China	0.83	0.73	0.83	1.42	1.34	1.45	1.45	1.18	0.98	1.20	1.20
EC-12	2.16	2.11	2.55	1.84	1.66	1.60	1.60	3.99	3.50	4.08	4.08
East Europe	1.31	1.29	1.29	1.62	1.87	1.69	1.69	2.13	2.42	2.18	2.18
USSR	4.28	4.46	4.62	1.45	1.59	1.51	1.41	6.20	7.10	6.80	6.50
Others	3.39	3.83	3.72	0.84	0.88	0.85	0.85	2.87	3.39	3.12	3.15
<b>RAPESEED</b>											
World	17.85	17.18	17.90	1.27	1.27	1.36	1.38	22.71	21.89	23.80	24.61
Total Foreign	17.85	17.18	17.90	1.27	1.27	1.36	1.38	22.71	21.89	23.80	24.61
Canada	3.67	2.90	2.63	1.17	1.07	1.26	1.26	4.31	3.10	3.33	3.33
China	4.94	4.99	5.30	1.02	1.09	1.25	1.25	5.04	5.44	6.60	6.60
EC-12	1.84	1.66	1.96	2.81	2.96	2.92	2.92	5.17	4.92	5.73	5.72
East Europe	0.88	1.00	0.94	2.51	2.64	2.38	2.38	2.20	2.64	2.25	2.25
India	4.83	4.99	5.20	0.91	0.83	0.83	0.92	4.38	4.12	4.00	4.80
Others	1.69	1.63	1.86	0.95	1.02	1.02	1.03	1.61	1.67	1.89	1.91
<b>FLAXSEED</b>											
World	3.70	3.65	3.76	0.45	0.51	0.62	0.62	1.67	1.85	2.33	2.33
United States	0.09	0.07	0.10	0.45	0.47	0.95	0.95	0.04	0.03	0.10	0.10
Total Foreign	3.61	3.59	3.66	0.45	0.51	0.61	0.61	1.63	1.82	2.23	2.23
Argentina	0.54	0.58	0.58	0.86	0.90	0.83	0.83	0.46	0.52	0.48	0.48
Canada	0.50	0.60	0.73	0.74	0.83	1.29	1.29	0.37	0.50	0.94	0.94
India	1.20	1.18	1.20	0.30	0.29	0.33	0.33	0.36	0.34	0.40	0.40
USSR	1.04	0.87	0.78	0.21	0.26	0.21	0.21	0.22	0.23	0.17	0.17
Others	0.33	0.36	0.37	0.66	0.66	0.68	0.68	0.22	0.24	0.25	0.25
<b>MAJOR OILSEEDS</b>	<b>145.93</b>	<b>146.88</b>	<b>146.00</b>	<b>1.35</b>	<b>1.40</b>	<b>1.44</b>	<b>1.43</b>	<b>196.44</b>	<b>205.82</b>	<b>208.85</b>	<b>208.64</b>
United States	29.58	29.41	29.18	1.70	2.01	2.08	2.08	50.31	59.24	60.59	60.59
Total Foreign	116.35	117.47	116.81	1.26	1.25	1.28	1.27	146.13	146.58	148.26	148.06
<b>COPRA</b>	--	--	--	--	--	--	--	4.28	4.74	4.88	4.88
<b>PALM KERNEL</b>	--	--	--	--	--	--	--	2.91	3.37	3.43	3.43
<b>TOTAL OILSEEDS</b>	--	--	--	--	--	--	--	<b>203.64</b>	<b>213.93</b>	<b>217.15</b>	<b>216.95</b>
<b>PALM OIL 1/</b>	--	--	--	--	--	--	--	9.47	10.94	11.21	11.01

1/ Not included in total oilseeds.

TABLE 7

**Cotton Area, Yield, and Production  
World and Selected Countries and Regions**

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	Prel.	Proj.		Prel.	1990/91	Proj.	Prel.	1989/90	1990/91	Proj.	
	1988/89	1989/90	1990/91	1988/89	1989/90	Jan.	Feb.	1988/89	1989/90	Jan.	Feb.
	---Million Hectares---			---Kilograms Per Hectare---				---Million 480-Pound Bales---			
World	33.8	32.0	33.6	545	545	564	558	84.7	80.0	86.9	86.1
United States	4.8	3.9	4.7	694	688	718	718	15.4	12.2	15.6	15.6
Total Foreign	29.0	28.1	28.9	521	525	539	531	69.3	67.8	71.3	70.4
Maj. Foreign Exporters	13.5	13.1	13.2	749	728	764	755	46.5	43.7	46.2	45.8
Australia	0.2	0.2	0.3	1,475	1,406	1,290	1,290	1.3	1.4	1.6	1.6
Central America 1/	0.1	0.1	0.1	830	834	804	804	0.4	0.3	0.3	0.3
China	5.5	5.2	5.5	751	728	764	764	19.1	17.4	19.3	19.3
Egypt	0.4	0.4	0.4	718	683	729	719	1.4	1.3	1.4	1.4
Mexico	0.3	0.2	0.2	1,209	891	913	913	1.4	0.8	0.8	0.8
Pakistan	2.5	2.6	2.7	568	560	565	556	6.5	6.7	7.0	7.0
Sudan	0.3	0.3	0.2	443	454	499	499	0.6	0.6	0.4	0.4
Turkey	0.7	0.7	0.7	882	851	976	976	3.0	2.8	3.0	3.0
USSR	3.4	3.3	3.2	805	805	854	827	12.7	12.3	12.4	12.0
Major Importers 2/	0.4	0.4	0.4	837	889	853	853	1.7	1.5	1.5	1.5
Other Foreign	15.0	14.7	15.3	306	335	336	330	21.1	22.6	23.5	23.1
Argentina	0.5	0.6	0.6	389	486	459	459	0.9	1.3	1.4	1.4
Brazil	2.4	2.2	2.1	311	300	370	353	3.4	3.0	3.4	3.4
India	7.3	7.3	7.7	245	310	286	277	8.3	10.4	10.1	9.8
Syria	0.2	0.2	0.2	667	930	872	907	0.5	0.7	0.6	0.7
Others	4.6	4.4	4.7	377	354	370	369	8.1	7.2	8.0	7.9

1/ Nicaragua, Guatemala, El Salvador, Honduras, and Costa Rica.

2/ Western Europe, Eastern Europe, Japan, Hong Kong, Republic of Korea, and Taiwan.

TABLE 8

The table below presents a 9-year record of the difference between the February projections and the final estimates. Using world wheat production as an example, changes between the February projection and the final estimate have averaged 2.5 million tons (0.5 percent) and ranged from -7.3 to 6.8 million tons. The February projection has been below the final 7 times and above the final 2 times.

## RELIABILITY OF PRODUCTION PROJECTIONS

COMMODITY AND REGION	PROJECTION AND FINAL ESTIMATES, 1981/82 – 1989/90 1/					
	Difference		Lowest	Highest	Below Final	Above Final
	Average	Average	Difference			
WHEAT	Percent	---Million Metric Tons---			Number of Years 2/	
World	0.5	2.5	-7.3	6.8	7	2
U.S.	0.1	0.0	-0.1	0.1	4	1
Foreign	0.6	2.5	-7.3	6.8	7	2
COARSE GRAINS 3/						
World	0.5	4.2	11.1	5.1	6	3
U.S.	0.1	0.2	-0.2	1.3	6	1
Foreign	0.8	4.4	11.0	5.1	4	5
RICE (Milled)						
World	1.9	5.7	13.0	1.8	8	1
U.S.	1.2	0.1	-0.2	0.1	3	1
Foreign	1.9	5.7	13.0	1.8	8	1
SOYBEANS						
World	1.7	1.6	-2.3	2.1	5	4
U.S.	1.3	0.7	-1.1	1.8	3	5
Foreign	3.2	1.3	-2.2	1.2	7	2
COTTON		---Million 480-lb. Bales---				
World	1.8	1.5	-5.4	2.8	6	3
U.S.	0.8	0.1	-0.1	0.3	2	6
Foreign	2.2	1.5	-5.7	2.7	6	3
UNITED STATES		-----Million Bushels-----				
CORN	0.1	6	-8	38	2	1
SORGHUM	0.1	1	0	4	0	2
BARLEY	0.5	2	-3	11	5	1
OATS	0.1	0	-2	0	2	0

1/ The final estimate for 1981/82–1988/89 is defined as the first November estimate following the marketing year and for 1989/90 last month's estimates.

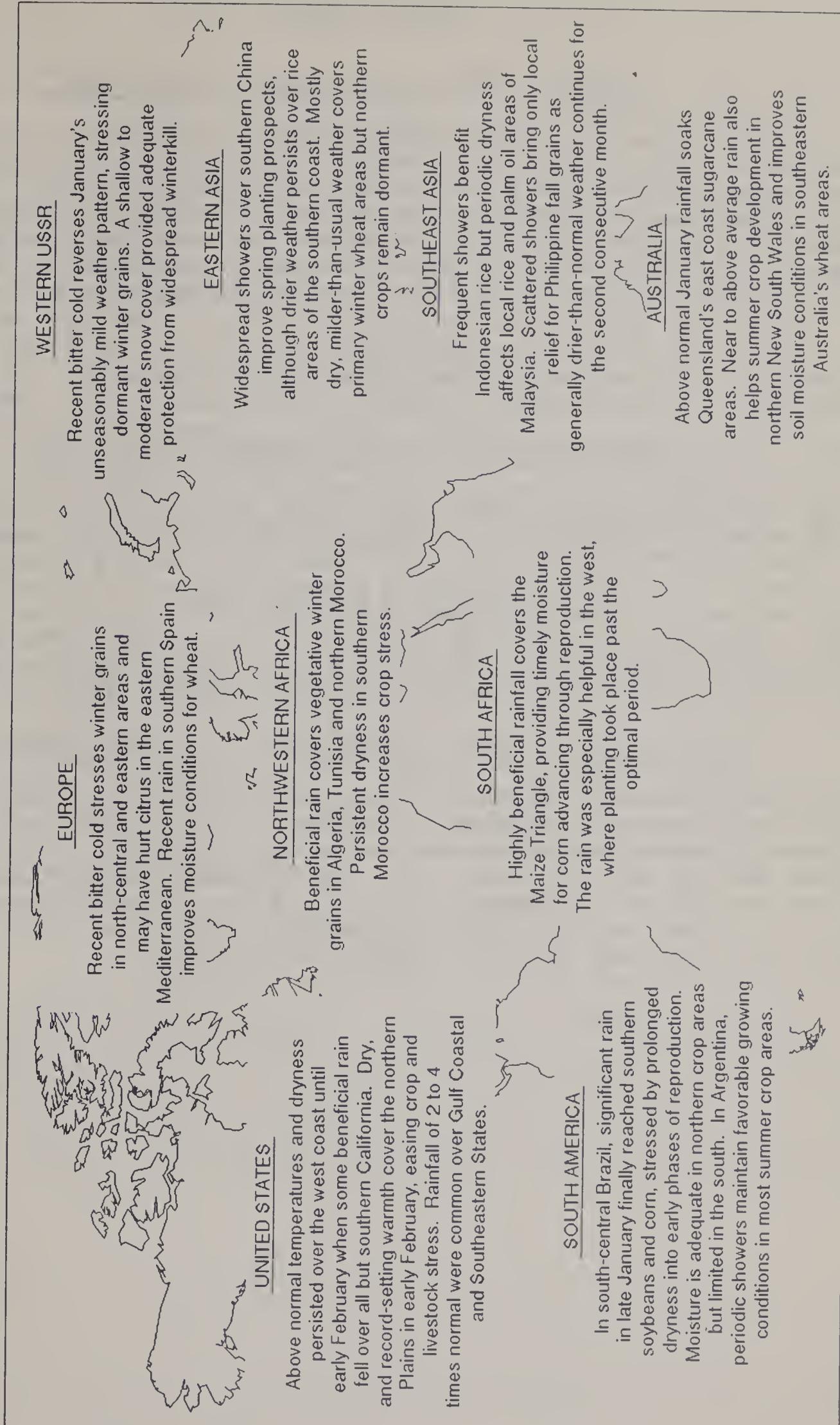
2/ May not total nine if projection was the same as the final.

3/ Includes corn, sorghum, barley, oats, rye, millet, and mixed grain.

# WORLD AGRICULTURAL WEATHER HIGHLIGHTS

FEBRUARY 11, 1991

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY



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## WEATHER BRIEFS

### BRAZIL: TIMELY RAINS BENEFIT SUMMER CROP

Dec. 20, 1990 - Jan. 19, 1991 was unseasonably dry across Southern Brazil and temperatures were sometimes above normal. These conditions severely stressed flowering soybean and reproductive corn crops. Rains returned to southern Brazil during late January improving soil moisture levels and halting further deterioration of the crop. The heaviest and most widespread rains fell during the week of Jan. 27 - Feb. 2, 1991, with amounts averaging 60-109 millimeters (mm) in Parana, 57-81 mm in Mato Grosso do Sul and 25-96 mm in Rio Grande Do Sul. Dry weather returned to Rio Grande Do Sul after Feb. 3, 1991, causing some concern. Further to the north rains were locally heavy (100-250 mm) in northern Sao Paulo and southwestern Minas Gerais. Since Jan. 20, 1991 temperatures have been normal to slightly below normal due to the rains.

### NORTHWEST AFRICA: MOSTLY BETTER THAN LAST YEAR

Most of Northwest Africa's winter grain areas received normal to above normal precipitation in December 1990, giving the 1991 winter grain crop a much better start than the 1990 winter grain crop. Last year winter grains were hurt by persistent dryness across Morocco and inland Algeria. Only Tunisia received widespread precipitation in January - February 1990. Precipitation has been rather widespread and beneficial during Jan. 13 - Feb. 10, 1991 for most of Northwest African vegetative winter grain crop. The notable exception is southern Morocco which has been dry since early January 1991.

### SOUTH AFRICA: RAINS IMPROVE OUTLOOK IN MAIZE TRIANGLE

Heavy rains fell across the Maize Triangle for the period of Jan. 11 - Feb. 10, 1991. Precipitation for this period was heaviest in the western two-thirds of the Maize Triangle, unlike December and early January when rain was heaviest in the east and the west was mostly dry. The frequent, soaking rains have greatly improved conditions for vegetative to filling corn across the region, especially in the west where planting took place past the optimal period. Temperatures have been normal to slightly above normal.

## PRODUCTION BRIEFS

### TURKEY: TREE NUT PRODUCTION UPDATE

Current assessments indicate that Turkey's 1990/91 pistachio crop totaled only 5,000 tons (inshell basis), unchanged from the preliminary estimate last September, but down sharply from the 25,000 ton 1989/90 harvest. The drop from the previous year is attributed to dry weather during the growing season compounding yield losses caused by the alternate-year bearing tendency of the crop. Estimated 1990/91 filbert production--at 380,000 tons (inshell basis)--is also unchanged since September. Filbert (hazelnut) yields also suffered from the biennial cycle following a 520,000-ton 1989/90 harvest. Production might have been even lower if the crop had not enjoyed favorable growing conditions.

### FRANCE: WALNUT PRODUCTION UPDATE

The U.S. agricultural counselor in Paris reports that French 1990/91 walnut production is estimated at 26,000 tons (inshell basis)--unchanged from the September forecast, but slightly below the revised 1989/90 crop of 27,500 tons mostly due to a decline in harvested area. Estimated production for 1988/89 has also been revised and is now placed at 22,800 tons.

### SPAIN: TREE NUT PRODUCTION UPDATE

Spain's 1990/91 almond production is estimated at 55,000 tons (shelled basis) 5,000 tons below the September estimate and 35,000 less than the bumper 1989/90 harvest. The reduction since September is attributed to a lower-than-usual kernel yield per ton of nuts cracked. The difference from a year ago was caused by both the biennial yield cycle and by an irregular blossom set and March-April frosts. Filbert production is estimated at 21,000 tons (inshell basis), 4,000 tons below both the September estimate and the revised 1989/90 harvest estimate. Poor nut fill and rain damage during harvesting are blamed for the reduction since September.

### ITALY: TREE NUT PRODUCTION UPDATE

Late season assessments indicate that Italy's 1990/91 almond crop totaled 21,000 tons (shelled basis), 1,000 tons less than estimated in September, but still the largest crop since 1986/87. Crop quality is reportedly below average due to small kernel size. Filbert production is estimated at 80,000 tons (inshell basis), 20,000 tons or 20 percent below the September estimate and 43 percent less than the 1989/90 harvest. A cyclical yield fluctuation is blamed for the small crop. Production estimates for both walnuts (18,000 tons inshell basis) and pistachios (300 tons inshell basis) are unchanged since September.

### BRAZIL: 1991/92 COFFEE PRODUCTION FORECAST DOWN

Brazil's 1991/92 coffee crop is forecast at 25 million 60-kilogram bags, 19 percent (6 million bags) less than last year's 31 million bag harvest, based on a report by the U.S. agricultural counselor in Brasilia. The report was prepared following January 8-24 field travel taken in the major producing states. No new plantings of coffee seedlings or deep pruning was observed in Parana or Sao Paulo. In Parana, the majority of coffee trees are in their off-year production cycle. Below normal rainfall and longer than normal periods between showers have significantly reduced cherry development in that state. In western and northern areas of Sao Paulo, most coffee trees have had no flowerings while elsewhere in the state most trees have had two major and one minor flowering followed by satisfactory cherry setting. Moderate weevil infestations were noted on central and eastern Sao Paulo trees.

The state of Minas Gerais is the country's largest producing state. In the southwest area, where most of the coffee is grown, coffee trees show good vegetative growth reflecting adequate rainfall with no evidence of rust or insect infestations. Most trees have had at least one major flowering and a second flowering is expected through mid-February. In this region an on-year production cycle will occur in the 1991/92 season. The remaining fourth of Minas Gerais' coffee is produced in the southeast. The state of Espirito Santo was not included in the field trip but is reported to have had adequate rainfall during and following coffee flowering and cherry set.

### SOVIET UNION: SUGAR ESTIMATES REVISED DOWN

Sugar production in the Soviet Union for 1990/91 has been lowered to 9.15 million tons (raw value), 4 percent less than last year, according to information from the U.S. agricultural counselor in Moscow. Reported harvest of sugarbeets amounted to 81.2 million tons compared with 97.4 million tons last year. The beet yield per hectare, at 24.7 metric tons, was down from the 29.1 tons per hectare obtained in the 1989/90 harvest.

### CANADA: NEW FARM "SAFETY NET" PROGRAMS ANNOUNCED

The Canadian agriculture minister announced two new voluntary farm subsidy programs that would provide price protection for grain and oilseed farmers and help stabilize farm incomes. Although these new farm income stabilization schemes have been announced for the 1991 crop year, the implementing legislation has not yet been tabled in Parliament. The Gross Revenue Insurance Plan will be delivered through crop insurance agencies with premiums being shared by the federal Government (42 percent anticipated), farmers (33 percent anticipated), and provincial Governments (25 percent anticipated). This program would guarantee the farmer a target revenue on a dollar per acre level, based on long-term average yields of the participating crop. The Net Income Stabilization Account will enable farmers to set aside money in individual accounts, with both the federal and (some) provincial Governments also contributing to the account. Farmers could contribute up to 2 percent of their net sales, matched by the Government. Farmers would make withdrawals from the account once net income falls below their 5 year average return, or when their taxable income falls below a pre-determined level (expected to be about Can\$10,000). The programs are similar in that premiums are paid into the programs and benefits are paid back to the participant when prices or incomes drop below a certain level.

#### BRAZIL: 1989/90 SOYBEAN PRODUCTION ESTIMATE INCREASED

The estimate of last year's (1989/90) Brazilian soybean production has been raised from 19.3 to 20.0 million tons, according to the U.S. agricultural officer in Sao Paulo, Brazil. Industry and government estimates for the crop currently fall within the 19.7 to 20.4 million ton range, indicating higher yields were achieved by the dry weather-stressed 1989/90 crop than earlier calculated. The revised production estimate is more consistent with crush and export data (including export registrations). Low producer prices, an over-valued cruzeiro, and high transportation costs led farmers to delay moving last year's crop to market, resulting in the under-estimation of total crop size. The recent devaluation of the cruzeiro improved producer prices and led to the emergence of soybeans previously not counted by production estimators.

#### CHINA: WARM WINTER THREATENS WHEAT CROP

The China Daily newspaper reported that a dry, warm winter is threatening the growth of the winter wheat crop in the northern China provinces of Hebei, Shanxi, Gansu, and Shaanxi. According to a Ministry of Agriculture official, the warm winter caused the wheat crop to grow faster than usual and have a shorter than normal 'hibernation', resulting in a weaker crop. Officials also fear that the warm winter might allow more pests to survive the winter and rust diseases to spread this spring. Information from the World Meteorological Organization and the NOAA/USDA Joint Agricultural Weather Facility confirm the Chinese report of a warm winter in northern China this year. Average temperatures were 1 - 3 degrees C. above normal in October and 2 - 4 degrees C. above normal in November, with the warmest readings in Shandong, Hebei, and Shaanxi provinces. The temperatures fell in December and dropped to below-normal levels in early January, but for the past 30 days temperatures in northern China have again averaged 1 - 4 degrees C. above normal and the trend seems likely to continue throughout February.

#### CZECHOSLOVAKIA: MILK PRODUCTION DOWN SLIGHTLY

Czechoslovakia's 1990 milk production totaled 7.044 million tons, down 1 percent from the 1989 level, according to the U.S. agricultural counselor in Vienna, Austria. Cow numbers were down about 1 percent, continuing a long term downtrend. Despite reduced milk production, a decline in fresh consumption allowed a small increase in the quantity of milk used for processing. Output of butter for 1990 is estimated at 157,000 tons, up from 156,000 a year earlier, while cheese production is estimated at 150,000 tons, down 2,000 from 1989.

#### SOVIET UNION: LIVESTOCK PRODUCTION RESULTS REPORTED

Total 1990 Soviet meat production was 19.9 million tons, down 1 percent from the 1989 output of 20.1, according to recently released Soviet statistics reported by the U.S. agricultural counselor in Moscow. Milk output was reported at 108.7 million tons, up slightly from 1989 output of 108.5 million tons, and egg production, at 82 billion eggs was down 3 percent from the 84.9-billion-1989 lay. Wool output was down 8,000 tons to 479,000 in 1990. Production of meat by private producers declined even more than the national average. Privately produced milk was up 2 percent while output of eggs was down 1 percent. Governmental procurements were reported to have declined even more than production.

## SOVIET UNION: 1990 GRAIN PRODUCTION REPORTED

The USSR economic results for 1990 were published by the State Committee for Statistics (GOSKOMSTAT) in January 1991 according to the U.S. agricultural counselor in Moscow. The published figures include total grain production of 218 million tons and total grain yield of 1.99 tons per hectare, on a net-weight basis (the weight of the grain after cleaning and drying). Soviet grain production numbers usually are reported in terms of "bunker" weight (the weight of the grain before adjustment for moisture and trash), which complicates the comparison between this year's results and previous years' results. For the 10 observations for which data are available for previous years, net weight ranges from 91.7 to 93.7 percent of bunker weight. The announced 1990 grain harvest of 218 million tons is close to the record 222.5 million tons (net weight) produced in 1978, and the yield of 1.99 tons per hectare surpasses the 1.73 tons per hectare level of 1978. USDA grain estimates are in the traditional bunker weight and remain unchanged pending receipt of additional sufficient information to provide estimates by grain type.

### USSR Grain Production and Yield

	Production		Yield	
	(Million Tons)		(Tons/Hectare)	
	1989	1990	1989	1990
Total Grain (net weight)	196.7	218.0	1.75	1.99
Wheat (net weight)	N/A	N/A	1.83	2.11
Corn (bunker weight)	15.3	9.8	3.71	3.47
Millet (net weight)	3.7	3.3	1.35	1.12
Buckwheat (net weight)	1.1	1.4	0.66	0.75
Rice (net weight)	2.3	2.2	3.43	3.50

Grain production declined in 1990 in Ukraine, Moldavia, Belorussia, Lithuania, Estonia, and Kirgiz (in Soviet Central Asia), but increased in the Russian Republic (RSFSR) and Kazakhstan.

### USSR Grain Production by Republic

Republic	1989	1990
	----- (Million Tons, Net Weight) -----	
RSFSR	104.8	116.8
Ukraine *	51.2	N/A
Kazakhstan	18.8	28.5
Other	21.9	N/A
Total	196.7	218.0

\* Ukraine production figure for 1990 was below 1989. Final figure not currently available.

SOVIET REGIONAL GRAIN PRODUCTION

The 1990 USSR total grain crop estimate of 235 million tons includes 108.0 million of wheat, 114.0 million of coarse grains, and 1.7 million of milled rice. This year's record grain yields have moved the Soviet Union into third place among world grain producers, behind China and the United States. The Soviet Union's position as the world's largest producer of wheat, barley, oats, and rye, is based on diverse agroclimatic zones and extensive agricultural land resources.

Laws passed in the last 2 years have altered the structure of Soviet agriculture and have dramatically increased the scope of local authority. Because of this, there is greater interest by grain analysts in studying grain production at republic/regional levels. This report is based primarily on official Soviet data averaged for the late 1980's. Regional grain crop geography is presented, and grain production in the "heartland", herein defined as the RSFSR (Russian Soviet Federated Socialist Republic), Ukraine, Belorussia, and Kazakhstan republics, is compared with that in several other regions -- the Baltics, Transcaucasus, Central Asia, and Moldavia.

The heartland republics dominate grain production, accounting for 95 percent of total grain area and 93 percent of total output. The RSFSR alone produces slightly over half of all Soviet grain, while the Ukraine, Kazakhstan, and Belorussia contribute 24, 13, and 4 percent, respectively.

Wheat

The USSR is a major producer of both winter and spring wheat, with the latter accounting for a third to half of total wheat output, depending on weather. Spring wheat yields are often less than half that of winter wheat although spring wheat normally comprises 60-65 percent of total Soviet harvested wheat area.

Virtually all spring wheat is grown in two republics of the heartland. The RSFSR grows about 60 percent of Soviet spring wheat and Kazakhstan harvests most of the remainder. In the RSFSR, the regions of West Siberia and Urals are the dominant production regions, each producing about 18 percent of the National total in an average year. In West Siberia, Altai Krai, Novosibirsk, and Omsk Oblasts are the primary growing areas. In the Ural region, production centers in Orenburg, Bashkir, and Kurgan oblasts. Other important RSFSR spring wheat areas are Saratov oblast and the Tatar autonomous republic in the Volga Valley and Krasnoyarsk oblast in East Siberia.

The heartland produces over 90 percent of Soviet winter wheat. The RSFSR and the Ukraine each contributes roughly 40 percent of total winter wheat output, with the latter normally ranking first in production; Kazakhstan and Belorussia harvest about 5 and 1 percent, respectively. In other republics, Moldavia, Azerbaidzhan (Transcaucasus), Kirghiz Soviet Socialist Republic (SSR), Uzbek SSR (Central Asia), and Lithuania SSR (Baltics) each produce roughly 0.2-1.0 million tons of winter wheat annually.

In years of average weather, the Ukraine grows roughly 20 million tons of winter wheat - together with 50,000 tons of spring wheat. Every oblast, with the exception of Zakarpatsk, Ivano-Frankov, and Chernovtsy, crops 150,000-375,000 hectares of winter wheat. Greatest winter wheat production is in the following oblasts, each producing roughly 1.0 million tons: Odessa, Vinitsa, Kharkov, Poltava, Kiev, Khmelinitza, Kherson, and Crimea.

In the RSFSR, most winter wheat is grown in the North Caucasus region which produces about 20 percent of the total Soviet harvest. Production centers in the oblasts of Krasnodar, Stavropol, and to a lesser extent -- Rostov. The Central Black Soil region of the RSFSR commonly harvests about 9-10 percent of Soviet winter wheat; important oblasts are Voronezh, Kursk, and Byelgorod. Other primary winter wheat oblasts in the RSFSR include: Volgograd, Kuibishev, Penza, and Saratov (Volga Valley); Gorkii (Volga Vyatsk); and Orlov, Ryazan, Moscow, and Tula (Center). Kazakhstan will harvest 1.5-2.0 million tons of winter wheat in average years with production mainly in Dzhambul and Chimkent oblasts.

#### Coarse Grains

Soviet heartland republics grow about 94 percent of the nation's coarse grains, with the RSFSR, Ukraine, and Kazakhstan contributing roughly 60, 15, and 15 percent, respectively. Significant coarse grains production outside the heartland includes barley in the Baltics (spring), Azerbaidzhan (winter), Kirghiz (spring), and Uzbek (winter) and corn in Moldavia.

#### Barley

Roughly 90 percent of all barley grown in the USSR is produced in the heartland. The RSFSR, Ukraine, Kazakhstan, and Belorussia harvest about 49, 22, 13, and 7 percent of total barley output, respectively. Soviet barley is predominantly (92-94 percent) spring barley.

The RSFSR grows about half of Soviet spring barley with the Volga Valley being the central production area - often harvesting an area of more than 4.0 million hectares. Primary Volga Valley oblasts for spring barley are Saratov and Volgograd. The Ural region, with about 3.0 million hectares of spring barley, centers production in the oblasts of Orenburg and Bashkir. Other important RSFSR spring barley regions (oblasts) include: North Caucasus/2.1 million hectares (Rostov); Central Black Soil/1.9 million hectares (Tambov); and Central/1.8 million hectares (Tula, Ryazan, Orlov).

The Ukraine annually produces 7-12 million tons of spring barley with yields fluctuating between 2.0 and 3.0 tons per hectare. Most area is harvested in Donetsk, Kirovograd, Zaporozhe, Dnepropetrovsk, and Nikolayev oblasts. Kazakhstan harvests about 6.5 million hectares of spring barley with yields averaging only 1.0 ton per hectare. The oblasts of Aktyubinsk, Kustanai, Uralsk, and Tselinograd each crop 0.5-0.9 million hectares of spring barley.

Soviet winter barley amounts to roughly 3.0 million tons grown on 1.5 million hectares. Important winter barley regions (oblasts) include: RSFSR/North Caucasus (Krasnodar, Stavropol); Ukraine (Crimea, Odessa); Kazakhstan (Chimkent); and Central Asia/Uzbek SSR.

## Rye

The heartland republics produce 95 percent of the total Soviet rye crop. The Baltic republics contribute virtually all the remainder with Lithuania being the largest producer. Spring rye is harvested on less than 50,000 hectares out of a total rye area of 10.0-10.5 million hectares.

The RSFSR accounts for about 70 percent of all Soviet rye with an area of roughly 7.3 million hectares. The Volga Valley harvests the greatest rye area among the regions of the RSFSR - about 1.8 million hectares. The Tatar ASSR (Autonomous Soviet Socialist Republic) and Penza, Saratov, and Ulyanovsk oblasts are major Volga rye producers. Orenburg and Bashkir oblasts in the Ural region each harvest roughly 0.4 million hectares of winter rye as does Kirov oblast in the Volga Vyatsk region. The Central region of the RSFSR grows rye on about 1.3 million hectares; Ryazan and Bryansk are important rye producing oblasts.

Rye and barley are the dominant grains in Belorussia, each grown on approximately 1.0 million hectares. With 16-18 percent of total Soviet production, Belorussian rye cultivation is rather evenly spread throughout the region with roughly 150,000 hectares in each of the 6 oblasts.

The oblasts of Chernigov, Zhitomir, and Volyn grow almost half of the Ukraine's 0.6 million hectares of rye. Yields in the Ukraine average about 2.0 tons per hectare, intermediate between those near 1.0 (Central Asia and Azerbaidzhan) and those near 3.0 (Belorussia and the Baltics).

## Oats

The Soviet heartland produces 97 percent of the total oats output; the Baltic republics produce the remainder. The RSFSR grows about 80 percent of Soviet oats production on approximately 10.0 million hectares. Oats yields are somewhat lower than rye in the USSR but tend to follow the same pattern regionally - lowest in Central Asia and Kazakhstan and highest in Belorussia and the Baltics. West and East Siberia together harvest roughly 4.0 million hectares of oats with greatest concentration in the following oblasts: Altai and Novosibirsk (West) and Krasnoyarsk and Chitinsk (East). Oats is a common crop in Ural region crop rotations and occupies about 1.7 million hectares. Perm and Chelyabinsk oblasts each crop about 0.3 million hectares of oats. The RSFSR's Central region also grows oats on roughly 1.7 million hectares and this grain is most significant in Kalinin and Smolensk oblasts.

The Ukraine produces about 1.5 million tons of oats on 0.65 million hectares, 10 percent of total Soviet output. Almost all of the 25 Ukrainian oblasts harvest 50,000-75,000 tons of oats annually although Chernigov, Sumy, Voroshilovgrad, and Nikolayev take in 125,000-150,000 tons each. Other important regions (oblasts) include: Kazakhstan (Kustanai and North Kazakh), Volga Vyatsk (Kirov), Belorussia (Mogilev), and Baltics (Lithuania SSR).

## Corn

Although the USSR harvests as much as 375 million tons of corn-for-silage and green feed, on roughly 20 million hectares, corn-for-grain output normally varies from 12-16 million tons from 4.0-5.0 million hectares. The Soviet heartland accounts for roughly 87 percent of total grain corn production (versus 94 percent of fodder corn).

The Ukraine produces about 56 percent of Soviet grain corn on an area of approximately 2.4 million hectares, with yield averaging slightly more than 3.0 tons per hectare. Dnepropetrovsk oblast is the main producer with a harvested area of 350,000-400,000 hectares; Zaporozhe, Kirovograd, and Donetsk oblasts each crop 200,000-250,000 hectares.

The RSFSR harvests about a quarter of Soviet grain corn, with area and yield of approximately 1.4 million hectares and 2.5 tons per hectare, respectively. Almost 75 percent of the RSFSR's grain corn area is cultivated in the North Caucasus oblasts of Rostov (0.4 million hectares), Krasnodar, and Stavropol. Other important oblasts include Volgograd (Volga Valley) and Voronezh (Black Soil).

In areas outside the heartland, Central Asia grows about 6 percent of Soviet grain corn, followed by Moldavia (4 percent) and Transcaucasus (2 percent). Yields in these areas tend to be higher than the national average, particularly in the Central Asian republics of Kirghiz (6.5 tons per hectare) and Tajik (5.0-5.5).

#### Millet

Soviet millet production averages 3.3 million tons annually from 2.7 million hectares. All millet is grown in the heartland regions; the RSFSR, Ukraine, and Kazakhstan contribute 66, 19, and 15 percent of total production, respectively. Yields vary from 0.7 tons per hectare in Kazakhstan to 1.2 in the RSFSR and 1.8 in the Ukraine.

In the RSFSR, millet is cultivated on roughly 1.7 million hectares, mostly in the Volga Valley oblasts of Saratov (0.4 million hectares), Volgograd, and Kuibishev. Other important millet-producing oblasts include: Stavropol and Rostov (North Caucasus); Orenburg (Ural); and Voronezh (Black Soil).

Millet in the Ukraine is grown primarily in the center-west, with 11 of the 25 oblasts cropping more than 20,000 hectares; none, however, normally harvests more than 40,000 hectares. Kazakhstan's 650,000 hectares of millet is centered in the oblasts of Pavlodar, Kustanai, and Aktyubinsk.

#### Buckwheat

All buckwheat production (roughly 1.5 million tons on 1.1 million hectares) is in the heartland with the RSFSR and the Ukraine accounting for 60 and 35 percent of total output, respectively. Important oblasts include: Orlov, Tula, and Ryazan (Central); Kursk (Black Earth); Tatar ASSR (Volga Valley); Bashkir (Ural); Altai (West Siberia); Amur (East Siberia); Sumy (Ukraine); and Pavlodar (Kazakhstan).

#### Pulses

Pulses, overwhelmingly dry peas, are virtually all grown in the homeland regions. Average Soviet annual pulse output approximates 8.0 million tons on 6.0-6.5 million hectares. The RSFSR crops about 62 percent of the total area with greatest concentration in the following oblasts/republics: Voronezh (Black Soil); Tatar ASSR (Volga Valley); Bashkir (Ural); and Altai (West Siberia).

The Ukraine cultivates roughly 1.6 million hectares of pulses annually; oblasts harvesting more than 100,000 hectares are Poltava, Vinitsa, Kiev, khmelinitsa, Cherkassk, and Odessa.

#### Rice

The Soviet Union is a minor rice producer with an annual late 1980's output, milled-basis, of 1.7 million tons from 0.65 million hectares. The heartland republics harvest slightly more than three-quarters of total production. Average yields are highest in the Ukraine and Kazakhstan, roughly 3.3 tons per hectare.

Krasnodar oblast in the North Caucasus region of the RSFSR crops almost a quarter of Soviet rice hectarage; Rostov oblast and Dagestan ASSR each harvest roughly 25,000 hectares of rice. The only other RSFSR oblast with significant rice production is Astrakhan, in the Volga Valley economic region. Other heartland oblasts emphasizing rice are Primorsk (Far East), and Kzyl-orda and Chimkent (Kazakhstan). In areas outside the Soviet heartland, Uzbek SSR in Central Asia produces about 0.5 million tons annually on 150,000 hectares.

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## MAP 2

### Economic Regions in the Soviet Union



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MAP 3



## CORN PRODUCTION IN SOUTH AFRICA

South Africa is the largest producer of corn in Africa. It is normally a major competitor for corn exports. This year's crop area is estimated to follow a declining trend of over half of the total grains planted to corn (52 percent), while nearly 30 percent of the total estimated harvested area is devoted to wheat. Harvested corn area for 1990/91 is estimated at 2.8 million hectares, down 0.8 million hectares or 22 percent from 1989/90. Corn production for 1990/91 is estimated at 6.0 million tons, down 3.2 million or 35 percent from last year.

Summer rainfall in the east started on time, but was below normal. Rainfall for the rest of the country was well-below normal until January. As a result, the crop area has been drastically reduced and production is estimated to be cut by one-third. As seen in the accompanying weather charts, only a few pockets of near normal precipitation fell during the normal planting period in the corn production regions of Transvaal and Natal from October to December. In addition, the temperature was above normal, causing additional stress to the crop.

Production is concentrated in the "maize triangle" of northwest and northeast Orange Free State (32 percent of total production), western Transvaal (29 percent), and the Transvaal regions referred to as the Eastern Transvaal Highveld (9 percent), and Rand (3 percent). White corn, which is used largely for human consumption, is planted in the eastern triangle. Yellow corn, used mainly for animal feed, is grown in the western triangle. This year, the Government announced that yellow corn would be mixed with white corn (at a ratio of 15 percent yellow to 85 percent white) in order to stretch supplies for human consumption. This has been done during previous crop shortfalls and although not popular with consumers, it is considered to be the only alternative.

Historically, yields have been widely variable. In 1982/83, the average corn yield was 1.0 ton per hectare, while in 1988/89, the yield was estimated at 3.28. The main factor affecting yields in the past has been weather during the silk/tassel period of January/February; however, this year the farmer had to contend with a drier-than-normal period during the planting season. In addition, the late planting means that much of the crop has yet to go through the critical silk/tassel stage.

Corn is normally sown from October to mid-December, reaches the silk/tassel stage in January/February, and matures in April/June. The crop is allowed to dry in the field since little drying equipment is available. This year, plantings were reported to be as late as the middle of January, due to insufficient rainfall. The crops that were planted in January are estimated to have a low yield potential and much of the late plantings may not be harvested as grain, but used as fodder. Weather in the coming weeks will determine how the corn will be utilized. In the western areas, a record (for late plantings) 480,000 hectares were reported planted between December 31 and January 15. In addition, a large portion of the corn crop was planted about 2 to 6 weeks late. Rather than having corn mature and dry in the fields in March/April, as it normally would, the late planted corn will still be in the grain filling stage during this period, and subject to risks from frost, cold weather, and diminishing rains.

Area has been steadily declining as South Africa attempts to stabilize grain production, particularly corn. The Government started a land diversification program in 1988, but only 568,000 hectares have been pulled into the program up to January 1991. Farmers are reacting rather coolly toward this program since many farmers are experiencing debt problems which make it difficult to move into livestock. Another facet of the program is that production is more a function of erratic yields rather than area. Therefore, reducing area will not affect production as much as the yearly fluctuations in yields as evidenced by the 4 million ton and 12 million ton corn crops in 1983/84 and 1988/89, respectively.

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Monthly Percent of Normal Precipitation, October 1990 - January 1991

MAP 4

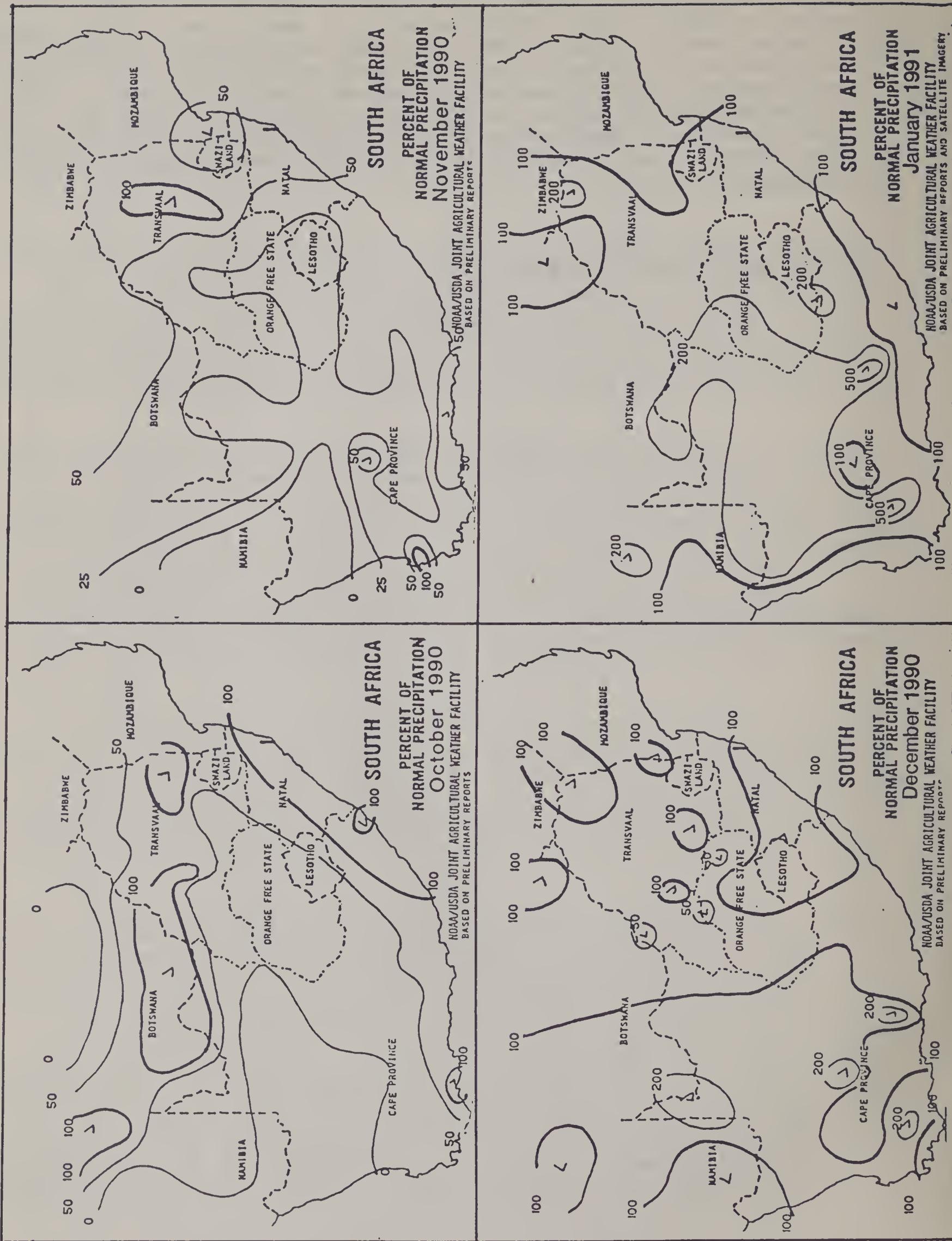
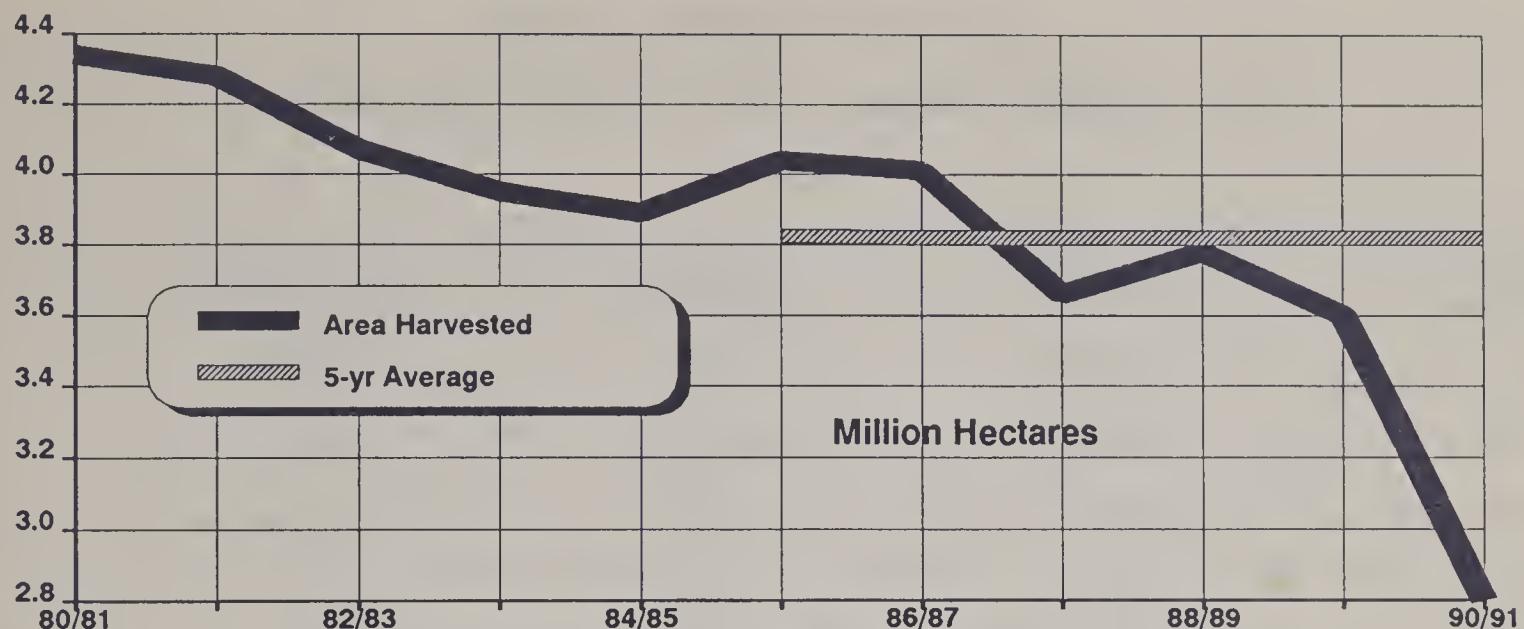
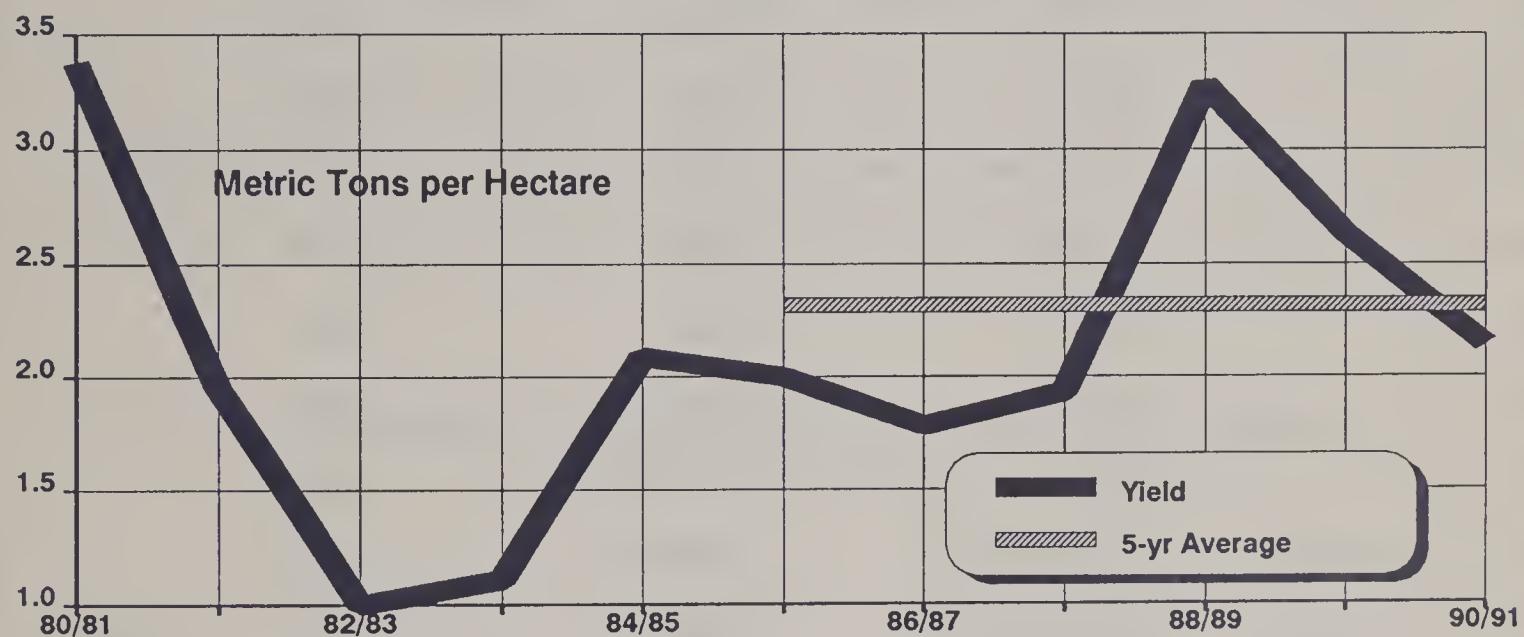


CHART 1

## South African Corn Harvested Area



## South African Corn Yield



## South African Corn Production

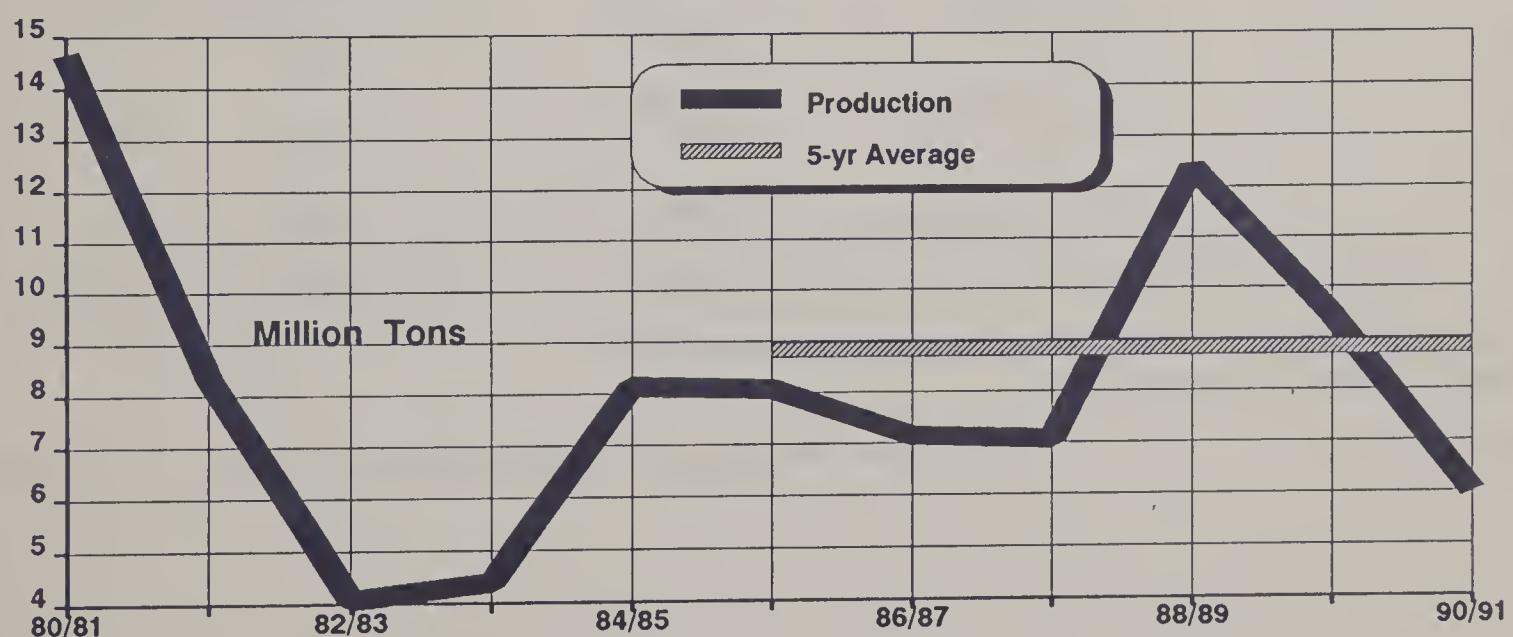


TABLE 9

## South African Corn: Harvested Area, Yield, and Production

<b>Year</b>	<b>Area</b>	<b>Yield</b>	<b>Production</b>
70/71	4.40	1.95	8.60
71/72	4.58	2.07	9.48
72/73	3.61	1.15	4.16
73/74	4.46	2.49	11.11
74/75	4.49	2.04	9.14
75/76	4.55	1.61	7.31
76/77	4.45	2.18	9.73
77/78	4.50	2.24	10.06
78/79	4.31	1.94	8.33
79/80	4.32	2.49	10.76
80/81	4.34	3.38	14.66
81/82	4.28	1.95	8.36
82/83	4.07	1.00	4.08
83/84	3.95	1.11	4.41
84/85	3.89	2.09	8.14
85/86	4.04	2.00	8.08
86/87	4.01	1.78	7.15
87/88	3.66	1.93	7.08
88/89	3.78	3.28	12.38
89/90	3.60	2.62	9.44
90/91	2.80	2.14	6.00

\*\ Area and Production in million's of hectares and metric tons.  
 Yield in metric tons per hectare.

## DECIDUOUS FRUIT AND TABLE GRAPE SITUATION

World commercial apple production for the 1990/91 season is expected to total 21.2 million tons, down 2 percent from the year earlier level. Apple crops in the United States and Canada were hurt by unfavorable weather conditions during the pollination and bloom stages. Current estimates show EC output down 4 percent from 1989/90 and 1 percent from the October USDA estimates. Output in Germany and France, two of the larger producers, is above last year's level as bumper late season crops helped offset part of the early season losses from an April freeze. Production in Italy is estimated down about 7 percent from last year's revised figure. The preliminary estimate for Southern Hemisphere apple production is 3.1 million tons, up 2 percent from last year. Australia and Chile are estimated to show the largest volume increases. Australia is benefiting from an "on year" in the production cycle. Increased bearing area and the maturation of recent plantings are boosting Chilean production.

Commercial pear production at the world level is estimated at 5.2 million tons for 1990/91, almost unchanged from last year. North American output is up 4 percent because of a larger crop in the United States. Production in the EC is estimated down 2 percent as a sharp increase in Italy was more than offset by declines elsewhere. The large Italian crop resulted from favorable weather and an increase in harvested area. The northern EC countries were hurt by a spring freeze and excessively dry weather in many producing regions. Pear production in the Southern Hemisphere is expected to total 770,300 tons, about 1 percent above the 1989/90 level. Output in Chile is expected to increase 12 percent as area continues to increase and recently planted trees mature. However, forecast declines in Argentina and New Zealand nearly offset the increase in Chile.

SOUTHERN HEMISPHERE DECIDUOUS FRUIT AND TABLE GRAPE PRODUCTION 1/  
(1,000 Metric Tons)

	<u>1988/89</u>	<u>1989/90</u>	<u>1990/91 2/</u>
Apples	2,911.2	3,041.1	3,116.0
Pears	715.6	761.5	770.3
Apricots	113.4	134.0	129.2
Cherries	17.6	18.4	19.8
Peaches/nectarines	649.6	656.9	628.0
Table grapes	781.8	889.1	985.0
TOTAL	5,189.2	5,501.0	5,648.3

1/ Apple and pear data are on a July/June production and marketing year. All other data are on a calendar year basis (1989, 1990, 1991).

2/ Preliminary.

Apricot production for 1991 in the Southern Hemisphere is now forecast at 129,200 tons, down 4 percent from 1990. Most of the downturn is expected to occur in South Africa, where output was up sharply in 1990. World 1990 apricot production is currently estimated at 1.2 million tons, down 5 percent from 1989, but up 2 percent from the October estimate. Upward revisions in the estimates for most Southern Hemisphere countries primarily accounted for the change since October.

The Southern Hemisphere's 1991 peach and nectarine crop is forecast at 628,000 tons, down 4 percent from 1990. Argentina's crop is forecast at 200,000 tons, down 20 percent, largely due to wind and hail damage early in the growing season. Australia, Chile, and South Africa are each forecast to show a modest production increase but not enough, in aggregate, to offset the Argentine decline. For 1990, world production is estimated at 6.24 million tons, up somewhat from the October estimate of 6.14 million tons. Better than expected harvests in the United States, Italy, and Chile accounted for most of the increase.

Early prospects for 1991 table grape production in the Southern Hemisphere are very favorable. Preliminary country forecasts aggregate to 985,000 tons, up 11 percent from 1990. Chilean production is forecast at 720,000 tons, up 90,000 tons. Area was up again in 1990 and maturing vineyards are pushing up the national average yield. An estimated 30 percent of Chile's vineyards are still not mature from the standpoint of maximum yields. World table grape production for 1990 is estimated at 4.6 million tons, 1 percent above 1989. Aggregate forecasts were not available in October, but among the individual countries, Italy's 1990 output is down 3 percent reflecting crop damage caused by a prolonged dry spell. Estimates for Argentina and Chile have been revised upward.

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TABLE 10

WORLD COMMERCIAL APPLE PRODUCTION  
(1,000 Metric Tons)

	<u>1988/89</u>	<u>1989/90</u>	<u>1990/91 1/</u>
<b>NORTHERN HEMISPHERE</b>			
<b>NORTH AMERICA</b>			
Canada	500.7	536.7	490.0
Mexico	624.3	473.9	493.2
United States	4,140.4	4,519.0	4,320.4
Total	5,265.4	5,529.6	5,303.6
<b>EUROPEAN COMMUNITY:</b>			
Belgium/Luxembourg	271.6	322.4	259.9
Denmark	90.2	90.0	95.0
France	1,934.7	1,818.2	1,884.9
Germany, Fed. Rep.	2,467.0	1,726.5	1,797.6
Greece	269.1	264.3	296.0
Italy	2,442.5	2,162.0	2,000.0
Netherlands	383.0	417.0	431.0
Spain	844.8	757.0	614.4
United Kingdom	234.4	416.2	268.9
Total	8,937.3	7,973.6	7,647.7
<b>OTHER EUROPE:</b>			
Austria	295.7	255.1	254.3
Hungary	1,130.8	959.0	950.0
Norway	52.0	69.0	50.4
Sweden	90.0	100.8	70.0
Switzerland	435.5	217.9	293.3
Turkey	1,950.0	1,800.0	1,900.0
Yugoslavia	518.0	546.0	500.0
Total	4,472.0	3,947.8	4,018.0
TOTAL EUROPE	13,409.3	11,921.4	11,665.7
<b>ASIA:</b>			
Japan	1,042.0	1,045.0	1,069.0
Taiwan	12.1	18.0	12.8
Total	1,054.1	1,063.0	1,081.8
Total Northern Hemisphere	19,728.8	18,514.0	18,051.1
<b>SOUTHERN HEMISPHERE</b>			
Argentina	1,029.5	1,075.0	1,060.0
Australia	328.0	315.0	350.0
Chile	660.0	690.0	730.0
New Zealand	359.5	403.9	416.0
South Africa	534.2	557.2	560.0
Total Southern Hemisphere	2,911.2	3,041.1	3,116.0
WORLD PRODUCTION	22,640.0	21,555.1	21,167.1

1/ Preliminary.

TABLE 11

WORLD COMMERCIAL PEAR PRODUCTION  
(1,000 Metric Tons)

	<u>1988/89</u>	<u>1989/90</u>	<u>1990/91 1/</u>
<b>NORTHERN HEMISPHERE</b>			
<b>NORTH AMERICA</b>			
Canada	23.3	21.3	19.5
Mexico	50.1	44.9	43.7
United States	781.0	831.7	869.8
Total	854.4	897.9	933.0
<b>EUROPEAN COMMUNITY:</b>			
Belgium/Luxembourg	84.0	87.2	63.8
Denmark	6.0	5.8	6.6
France	315.1	326.9	318.3
Germany, Fed. Rep.	498.2	347.1	328.8
Greece	91.4	95.0	86.7
Italy	986.5	820.0	1,000.0
Netherlands	89.0	113.0	90.0
Spain	457.3	550.2	406.9
United Kingdom	31.7	43.6	36.8
Total	2,559.2	2,388.8	2,337.9
<b>OTHER EUROPE:</b>			
Austria	53.8	46.7	44.8
Norway	7.8	4.2	5.5
Sweden	11.3	10.8	10.4
Switzerland	23.5	17.9	18.0
Turkey	410.0	425.0	430.0
Yugoslavia	173.3	177.0	150.0
Total	679.7	681.6	658.7
Total Europe	3,238.9	3,070.4	2,996.6
<b>ASIA:</b>			
Japan	454.1	447.9	461.0
Total Northern Hemisphere	4,547.4	4,416.2	4,390.6
<b>SOUTHERN HEMISPHERE</b>			
Argentina	262.0	265.4	251.0
Australia	147.0	152.0	157.0
Chile	119.0	139.0	155.0
New Zealand	12.7	12.6	12.3
South Africa	174.9	192.5	195.0
Total Southern Hemisphere	715.6	761.5	770.3
WORLD PRODUCTION	5,263.0	5,177.7	5,160.9

1/ Preliminary.

TABLE 12

WORLD COMMERCIAL APRICOT PRODUCTION  
(1,000 Metric Tons)

	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1/</u>	<u>2/</u>
<b>NORTHERN HEMISPHERE</b>						
France	96.2	128.0	105.0	N/A		
Greece	153.9	83.9	113.4	N/A		
Italy	195.8	189.0	181.5	N/A		
Spain	157.4	155.6	120.7	N/A		
Turkey	360.0	445.0	400.0	N/A		
United States	92.2	108.9	111.1	N/A		
Yugoslavia	28.0	46.0	40.0	N/A		
Total	1,083.5	1,156.4	1,071.7	N/A		
<b>SOUTHERN HEMISPHERE</b>						
Argentina	23.0	16.6	16.5	16.0		
Australia	29.5	31.0	32.0	32.5		
Chile	12.5	14.0	14.7	15.5		
New Zealand	8.5	8.8	10.0	9.3		
South Africa	44.2	43.0	60.8	55.9		
Total	117.7	113.4	134.0	129.2		
WORLD PRODUCTION	1,201.2	1,269.8	1,205.7	N/A		

1/ Preliminary. 2/ N/A = not available until October 1991.

TABLE 13

WORLD COMMERCIAL CHERRY PRODUCTION  
(1,000 Metric Tons)

	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1/</u>	<u>2/</u>
<b>NORTHERN HEMISPHERE</b>						
Canada	12.3	13.5	13.0	N/A		
France	77.4	99.0	74.0	N/A		
Germany, Fed. Rep.	232.8	205.9	205.3	N/A		
Greece	35.0	35.8	41.7	N/A		
Italy	144.0	136.5	100.0	N/A		
Japan	18.4	14.5	16.0	N/A		
Spain	42.9	61.8	42.6	N/A		
Turkey	215.0	210.0	200.0	N/A		
United States	276.1	295.3	236.9	N/A		
Yugoslavia	200.8	220.0	170.0	N/A		
Total	1,254.7	1,292.3	1,099.5	N/A		
<b>SOUTHERN HEMISPHERE</b>						
Australia	7.1	7.0	7.2	7.5		
Chile	8.6	10.6	11.2	12.3		
Total	15.7	17.6	18.4	19.8		
WORLD PRODUCTION	1,270.4	1,309.9	1,117.9	N/A		

1/ Preliminary. 2/ N/A = not available until October 1991.

TABLE 14

WORLD COMMERCIAL PEACH & NECTARINE PRODUCTION  
(1,000 Metric Tons)

	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1/</u>	<u>2/</u>
<u>NORTHERN HEMISPHERE</u>						
Canada	44.1	37.6	43.0	N/A		
France	451.5	546.0	505.0	N/A		
Greece	614.6	641.0	700.0	N/A		
Italy	1,476.1	1,682.0	1,700.0	N/A		
Japan	202.9	180.2	201.1	N/A		
Mexico	264.5	265.0	265.0	N/A		
Spain	649.4	769.8	602.6	N/A		
Turkey	328.0	315.0	305.0	N/A		
United States	1,367.2	1,240.5	1,191.7	N/A		
Yugoslavia	77.0	80.0	65.0	N/A		
Total	5,475.3	5,757.1	5,578.4	N/A		
<u>SOUTHERN HEMISPHERE</u>						
Argentina	260.0	260.0	249.5	200.0		
Australia	75.0	63.4	67.6	71.6		
Chile	151.4	162.4	175.0	185.0		
New Zealand	28.5	24.6	26.4	25.9		
South Africa	145.7	139.2	138.4	145.5		
Total	660.6	649.6	656.9	628.0		
WORLD PRODUCTION	6,135.9	6,406.7	6,235.3	N/A		

1/ Preliminary. 2/ N/A = not available until October 1991.

TABLE 15

WORLD COMMERCIAL TABLE GRAPE PRODUCTION  
(1,000 Metric Tons)

	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1/</u>	<u>2/</u>
<u>NORTHERN HEMISPHERE</u>						
France	128.6	125.0	125.0	N/A		
Greece	318.9	269.8	275.0	N/A		
Italy	1,427.4	1,490.0	1,350.0	N/A		
Japan	259.5	235.2	254.8	N/A		
Mexico	335.6	345.0	347.0	N/A		
Spain	414.0	430.1	496.7	N/A		
United States	754.2	714.2	695.8	N/A		
Yugoslavia	173.3	153.3	172.5	N/A		
Total	3,811.5	3,762.6	3,716.8	N/A		
<u>SOUTHERN HEMISPHERE</u>						
Argentina	120.0	140.0	146.0	150.0		
Chile	490.0	540.0	630.0	720.0		
South Africa	87.0	101.8	113.1	115.0		
Total	697.0	781.8	889.1	985.0		
WORLD PRODUCTION	4,508.5	4,544.4	4,605.9	N/A		

1/ Preliminary. 2/ N/A = not available until October 1991.

## FOREIGN COTTON AREA INDICATIONS FOR 1991/92

Important factors that influence foreign cotton area include the current cotton market situation, domestic and world economic conditions, government policies, and weather. Of these factors, this season's higher cotton prices which are associated with low stock/use ratios are providing the biggest stimulus for influencing next season's cotton area.

Preliminary indications are that foreign harvested cotton area in 1991/92 could range from 28.5 to a record 30.5 million hectares. The high end of the forecast range suggests a possible increase from the estimated 29 million hectares harvested in 1990/91 and is supported by current higher cotton prices relative to last season and continued strong demand. The low end of the forecast range considers the possibility of weather-related losses and financial problems.

In China, as in the past, production increases are needed so that it can maintain its role as a major exporter of both raw cotton and textiles while meeting its rapidly rising domestic consumption requirements. The Government has indicated that the goal for the eighth 5 year-plan (1991-95) is to produce 21 to 23 million 480-pound bales per year. China is expected to continue its push to increase cotton production in 1991/92. China's 27-percent boost in the cotton procurement price and subsidization of cotton production inputs prompted larger plantings for 1990. While there are no signs of price increases for the 1991 season, maintenance of cotton prices at the 1990 level combined with depressed grain market prices should help ensure a slight expansion of area planted for 1991.

Cotton area in the Soviet Union for 1991/92 is affected by two opposing forces: the need to earn hard currency versus the need to provide more food production for the cotton producing region of Soviet Central Asian republics. The strongest argument for area expansion revolves around current relatively high world cotton prices and the pressure to earn hard currency by means of cotton exports. The pressure to reduce cotton plantings and increase the area dedicated to food and forage crop production comes from the Asian Republics. In addition to their food concerns, the republics have experienced an increase in land salinity from cotton irrigation. On balance, cotton area is expected to decline slightly next season as it has done for the the past 3 years.

In Mexico, indications are that, due to large farmer owned stocks of poor quality cotton, area planted to cotton is expected to be down from the 1990/91 level. However, the exact level will depend primarily on financing available to producers. Cotton producers have had 2 consecutive years of poor cotton crops, complete with high levels of pre- and post-harvest crop losses. This year, producers could find themselves in a financial crunch with their amount of private saving low and production loans hard to get. In most Central American countries, planting decisions remain uncertain. Political and labor unrest, foreign exchange needs, and input costs will largely determine cotton production levels in most of these countries.

South America cotton planting for 1991/92, which will begin in about 7 months, remain uncertain. If production financing prospects do not improve from the current season, plantings are likely to be down from 1990/91. Lower plantings are most probable in the three largest producing countries of Brazil, Argentina, and Paraguay. In Brazil, the largest of the three, sowing will be influenced directly by the level of rural credit availability, minimum support prices, and food crop prices at planting time.

In South Asia, cotton plantings should push moderately above last year. Although plantings in Pakistan will not begin until the April-May period, cotton area intentions for the 1991/92 season are being influenced by this year's higher cotton prices along with a continued strong domestic demand from the expanding textile industry. Area expansion is constrained by the lack of available land in the major cotton producing region. In India, area planted next season will be influenced by the outcome of the debate between textile mills and the Ministry of Agriculture over the amount of cotton to be exported out of the 1990/91 crop. A pro-export decision from the Indian Government is likely to push cotton prices up and encourage larger plantings. In Australia, sowing is expected to increase if higher cotton prices prevail when planting time nears in September-October and sufficient soil moisture is available to maintain this year's level of dryland seeding.

In Turkey, cotton sowing in May of this year is expected to be down from last season as farmers switch from cotton to other crops. This change is reflected in the shift in government policy not to include cotton in the Government's support program. Currently, domestic lint prices are lower than last year as imports of raw cotton, cotton yarn, and fabric at competitive prices have depressed domestic prices. This has forced the agricultural marketing cooperatives, which had purchased cotton from member farmers at approved government prices, to miss timely payments to cotton farmers. This condition is expected to continue into next season. The planting of cotton takes place following the harvest of wheat in the early spring. Since cotton is excluded from Government support and production costs are higher for cotton compared with other crops, the planting of soybeans and/or corn after the wheat harvest is drawing farmers away from cotton in the Adana, and to a lesser extent, in the Aegean regions. Syria plans to increase the area planted to cotton. The area actually sown will depend upon the severity of the current drought and its impact on the availability of irrigation water. If the rainfall continues to be below average, irrigation for cotton and other summer crops will be limited.

A moderate increase is forecast for cotton planting in Africa. Many of these countries depend very heavily on cotton exports for sorely needed foreign exchange earnings. Because of this need, there is strong support for the cotton sector. In West Africa, this is particularly true for Cote d'Ivoire, Mali, Benin, Cameroon, and Burkina. The Egyptian Government would like to expand cotton area. However, the major constraint to production continues to be the lack of incentive due to the low procurement price. Thus far the Ministry of Agriculture and Land Reclamation and other concerned Ministries do not appear inclined to liberalize controls on cotton production or marketing or to increase the procurement price next season. In Sudan, it appears that area will increase to provide much needed foreign exchange from cotton exports. The cotton area in Zimbabwe also is anticipated to increase as the Government has raised producer prices to encourage farmers to plant more cotton. South African area is expected to rebound from the 1990 drought reduced area.

Cotton area in the European Community (EC) is likely be slightly below last year's level as alternative crops, such as corn, are currently at very attractive price levels. However, planting decisions are especially difficult to forecast at this time since the EC is delaying the 1991/92 price package as they reform the Common Agricultural Policy. Greece, the largest EC producer, is expected to shift at least 10 percent of its area to corn.

NOTE: Information in this article is based on field reports received in early January 1991 from U.S. agricultural counselors and attaches. Actual area could vary from these estimates for a number of reasons, including government policy changes, weather during the crop season, and price changes for cotton and competing crops. The first official USDA forecast of total 1991/92 foreign harvested area will be issued in May. Individual country estimates for area, yield, and production will be released in July.

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CHART 2

## 1991/92 Forecast of Foreign Cotton Area

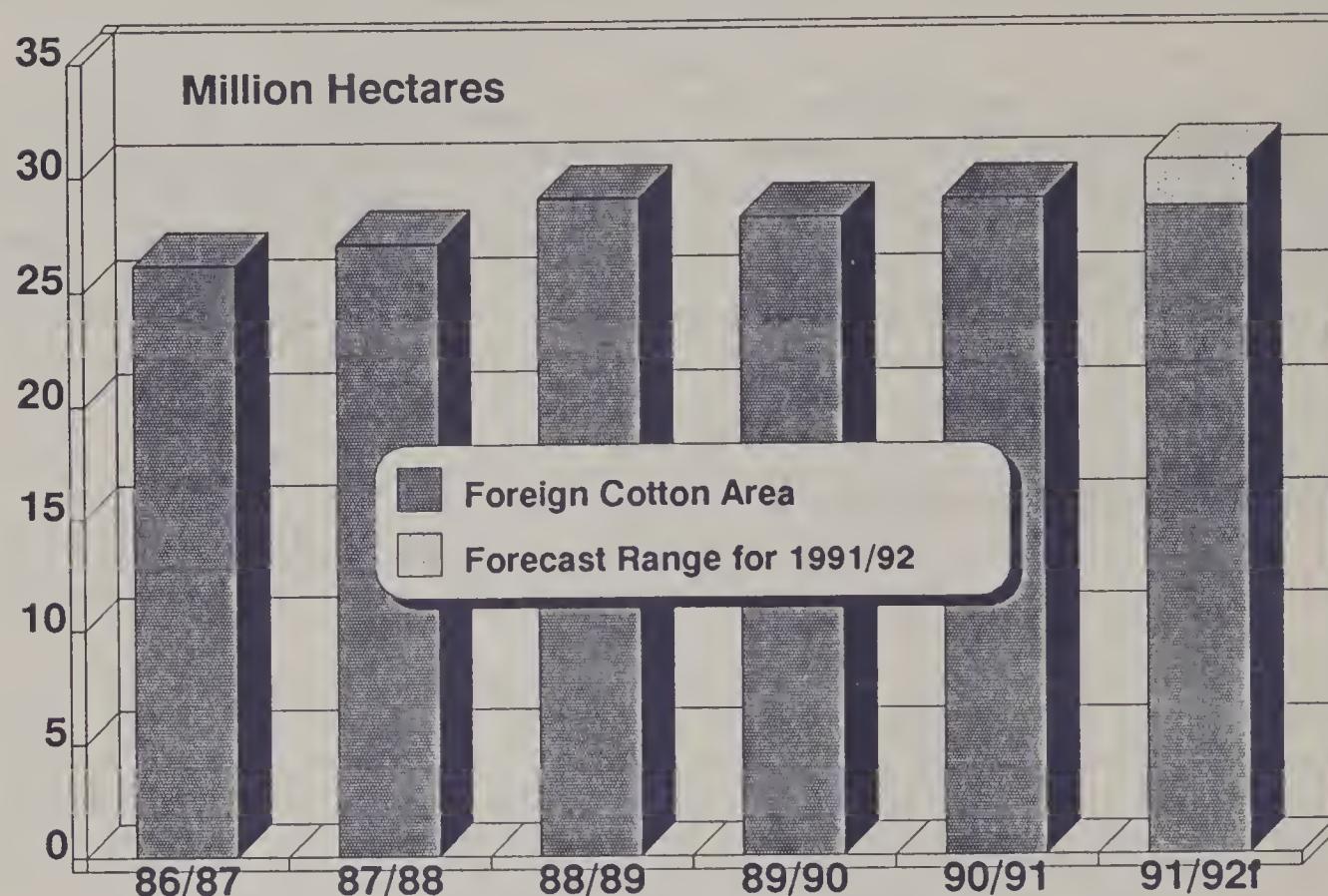


TABLE 16

### FOREIGN COTTON AREA, YIELD, AND PRODUCTION

Year	Harvested Area (1,000 Ha)	Yield (Kg/Ha)	Production (1,000 480-Bales)
1981/82	27,415	441	55,542
1982/83	27,499	446	56,289
1983/84	27,938	454	58,232
1984/85	29,752	556	76,034
1985/86	27,606	531	67,326
1986/87	26,158	509	61,087
1987/88	27,058	535	66,483
1988/89	28,961	521	69,254
1989/90	28,117	525	67,808
Estimate 1990/91	28,867	531	70,442
5-Year Avg.	27,580	524	66,392
Forecast 1991/92	(28,500 to 30,500)		

## DAIRYING IN GERMANY

Reunification of East and West Germany became a fact on Oct. 3rd 1990, but even before that the reunification process was having an important impact on the agricultural sector and on dairying in particular. Available information indicates dairying, particularly in the eastern region (the former East Germany), has been impacted significantly. This article presents some of the characteristics of the dairy sector in both regions of Germany and discusses some of the adjustments that are being made in the dairy sector in eastern Germany as it integrates with western Germany (the former West Germany) and the European Community (EC).

A comparison of the structure of dairying in the two regions gives some indication of the potential problems. Dairying in western Germany is characterized by many small to moderately sized operations. Statistics for 1987 indicated that it had 330,000 dairy herds with an average size of 16 cows. This is the lowest average in the northern EC countries. France, with the next lowest average, reported a 20 head average while neighboring Belgium and The Netherlands had averages of 24 and 40 head, respectively. Half the national herd is reported to be held by farms milking 20 to 50 cows. German Fresian, a dual purpose breed, is the most popular, accounting for about half the herd. Simmental, also dual purpose, accounts for one-fourth the herd.

In contrast to the relatively small units in western Germany, milk production in eastern Germany is characterized by a small number of large units. Prior to reunification, the national average was reported to be above 500 milk cows per farm with some units as large as 2,000 cows. The dual purpose, black and white breed (Fresian) predominates. During the past decade, East German planners thought that more beef rather than more milk was needed with the result that beef production was emphasized. A result of that emphasis has probably been a reduction in the genetic potential of the herd to produce milk.

Despite the large differences in the structure of milk production, differences in the milk processing industry are probably of even more importance. The milk processing industry of western Germany is generally in the hands of producer owned cooperatives and is modern and up to date in terms of both product quality and variety of products and packaging. The state owned processing sector in the former East Germany, while producing a safe product health wise, generally had not kept up with modern methods, with the result that quality, variety, and packaging are not up to international standards. Thus as soon as trade within the country was freed, consumers in the eastern regions tended to strongly favor products from western Germany.

Differences in the size and productivity of the two regions are shown in the following table.

TABLE 17

SELECTED DAIRY PRODUCTION DATA FOR EASTERN AND WESTERN GERMANY 1/

	1986	1987	1988	1989	1990
Total Cattle (Mil. head)					
Eastern Germany	5.8	5.8	5.7	5.7	5.7
Western Germany	15.6	15.3	14.9	14.7	14.6
Combined	21.4	21.1	20.6	20.4	20.3
Milk Cows (Thou. head)					
Eastern Germany	2064	2045	2012	2010	2001
Western Germany	5437	5277	5059	4950	4800
Combined	7501	7322	7071	6960	6801
Milk Prod. (Mil. Ton)					
Eastern Germany	7.9	8.2	8.1	8.2	7.8
Western Germany	26.4	24.4	24.0	24.2	23.6
Combined	34.3	32.6	32.1	32.4	31.4
Milk/Cow (Tons)					
Eastern Germany	3.82	4.01	4.03	4.08	3.92
Western Germany	4.86	4.62	4.74	4.89	4.92
Combined	4.57	4.45	4.54	4.66	4.62
Butter (1000 tons)					
Eastern Germany	320	322	310	313	305
Western Germany	567	464	390	378	381
Combined	887	786	700	691	686
Cheese (1000 tons)					
Eastern Germany	253	264	264	275	205
Western Germany	530	553	585	610	630
Combined	783	817	849	885	880
Nonfat Dry Milk (1000 tons)					
Eastern Germany	50	52	48	50	50
Western Germany	647	474	398	450	420
Combined	697	526	446	500	470

1/ The former countries of East Germany and West Germany respectively.

With its reunification with western Germany, the dairy industry in eastern Germany also became subject to EC rules and benefits. Some of the changes that will bring include changes in the number of cows being milked, feed usage, milk production and utilization, prices, and the structure of the processing industry.

## MILK

Under the Common Agricultural Policy of the EC (CAP), milk deliveries to dairies in eastern Germany must fall by at least 20 percent, from the 7.8 million tons bought by the state in 1989 to 6.3 million tons in 1991/92. The temporary quota for eastern Germany was set at 5.37 million tons for the period July 1, 1990 to March 31, 1991. As private farmers break away from the collective farms, they are given a part of the quota from their parent farm. Farmers are adjusting dairy herds in response to the signals of the market. Official statistics show that the number of milk cows declined from a high of 2.0 million in 1988, to 1.9 million by August 1, 1990. During 1990, many dairy cows were sold for slaughter and the meat exported, in large part to the USSR and other EC countries.

Along with declining cow numbers in eastern Germany, feeding regimes are changing as well. In the past, mixed feeds were formulated from whatever grains and feedstuffs were available as long as they met minimum standards. Now, farmers can freely purchase feeds to maximize output, so the productivity per cow is increasing.

In contrast to the problems of most of the dairy sector in eastern Germany, reunification has permitted the reconstruction of natural trade ties between the city of Berlin and the surrounding countryside for the supply of milk. The city dairy of West Berlin, which in the past trucked milk to Berlin from as far away as Bavaria, plans to buy most of its raw milk from local (eastern region) farmers.

The average price paid to East German farmers for milk in 1989 was 1,700 East German marks per ton. The current guaranteed producer price for raw milk is DM628 per ton. Under the CAP, farmers are guaranteed a minimum price for milk up to the farm quota level, so the efficient milk producers in the East should be able to prosper. However, despite the price protection offered by the CAP, many farms are facing an uncertain financial and legal future as the region tries to adjust to market relationships.

## DAIRY PROCESSING

The major problems facing the milk industry stem from an outdated and under-capitalized processing industry and, as a result, the milk processing sector of Eastern Germany is undergoing a major restructuring. Of 155 milk processing plants in operation at the end of 1989, only 118 were operating in late 1990, and some trade sources were forecasting that only half of those plants would survive. Of the 155 facilities, 76 belonged to cooperatives, 59 were state factories and 20 were small private processors. Many factories, including half of the cheese facilities, closed because farmers sold their milk to processors in western Germany that could pay an acceptable cash price upon delivery. Meanwhile, processors in eastern Germany faced severe cash flow problems because the generous subsidies of the previous regime were abolished in July 1990.

## BUTTER

The former East Germany produced two grades of butter. The lower grade, used for domestic consumption, contained 70 percent fat and accounted for 18 percent of production. The other grade, with 82 percent fat content, was exported where possible, or sold domestically. In 1990, almost all of the butter produced in eastern Germany was of the higher fat content. The quality of the butter produced in eastern Germany differs somewhat from the EC norms.

The policy of the previous regime was to maximize butter production in order to sell it on the world market for hard currency. Butter production reached 313,000 tons in 1989 and has continued strong in 1990. Strong performance occurred in 1990 despite the introduction of the free market system and the loss of domestic consumption because it was supported by an intervention buying system introduced on July 16, 1990.

The continued high production of butter in 1990 is not due to buoyant consumer demand but to intervention buying. Some officials estimate that, since July 1, 1990, only one-third of the butter produced in eastern Germany was consumed there. Total butter consumption has fallen sharply due to declining consumption of bread and the availability of many tasteful low-priced margarine products and vegetable oils for cooking.

## CHEESE

Increased cheese production was another of the priorities of the previous regime. Cheese production in the former East Germany had increased 30 percent during the last 5 years of the 1980's. However, the long awaited investment program for the cheese processing industry did not materialize, and as a result, the cheese sector met the market economy with outdated equipment and a poor market image. In 1989, hard cheese accounted for half of total cheese production, soft cheese for 15 percent, and the rest was a variety of fresh cheeses. The sharp reduction in cheese production was comparable for all types.

East German citizens previously consumed record amounts of cheese, due to ample availability, a relatively wide range of fairly consistent products, and subsidized prices. In 1988, per capita consumption of all cheeses was 15.8 kilograms compared to 9.7 in western Germany. This consumption pattern was broken with the introduction of a vast array of new foods which became available in eastern Germany in 1990. By April consumers had more choice of vegetables, fruits, and sausages than before. With the currency union on July 1, 1990, cheese products from western Germany tended to dominate the market as consumer demand for products from eastern Germany declined and as many eastern Germany based wholesale networks were replaced by western wholesalers who brought in western products.

## NONFAT-DRY MILK (NDM)

Dry milk is produced by 2 methods in eastern Germany. Roughly half the total output is produced by 13 plants using the spray-dry method while the other half is produced by 24 plants using the roll-dry method. The average composition of NDM is reported to be 1.5 percent or less butterfat and 94 percent dry matter.

Preliminary information indicated output of NDM has been less affected by reunification than other dairy products largely due to price support by the intervention system. The Government of East Germany, in coordination with and funded by the Government of West Germany, initiated an intervention program for NDM produced in eastern Germany in mid-July. This intervention system for eastern Germany ended on September 30 when the EC system was applied. The intervention price for NDM in eastern Germany is over DM6,400 per ton. Even at this price, some plants claim losses of up to DM1,000 per ton because their cost of production is too high due to out-of-date technology.

#### SUMMARY

During the next 2 or 3 years, the diary sector in the former East Germany is expected to continue to go through major restructuring as it attempts to harmonize with EC rules and markets. This restructuring will continue to put major financial pressure on inefficient producers and processors. After the restructuring is complete it is likely that with its larger herds, milk production in eastern Germany will have some economic advantages over production in the western region.

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## EC-12 RAPESEED PLANTING INTENTIONS

The European Community (EC-12) rapeseed area is estimated to increase 7 percent from an estimated 1.97 million hectares to a record estimated 2.11 million hectares (excluding eastern Germany) in 1991/92. The unification of eastern and western Germany will boost that country's rapeseed area to 40 percent of total EC-12 area. France will drop to second place with 29 percent of the total. Although most of the rapeseed has already been planted, the oilseed scheme is expected to change as the European Commission is currently reforming their Common Agricultural Policy. The following is an unofficial USDA country by country estimate of planted rapeseed area for 1991/92 obtained from U.S. agricultural counsleors and attaches stationed in western Europe.

GERMANY: Rapeseed area for a united Germany is forecast to increase 30 percent to 940,000 hectares in 1991/92. Similar to last year, this winter has been mild. Due to improved winter-hardy varieties very little winter kill is expected. The former West Germany is expected to plant 677,000 hectares in winter rapeseed and 13,000 hectares in spring, while the former East Germany is expected to plant 236,000 hectares in winter rapeseed and 14,000 hectares in spring. In the West, farmers have shifted almost completely to double low varieties. The situation in the East is less certain, but reports indicate that most farmers purchased double low varieties.

FRANCE: Rapeseed area is forecast unchanged at 680,000 hectares in 1991/92 due to less favorable rapeseed prices compared to grain returns. The winter rapeseed crop, which accounts for nearly all the rapeseed, was sown with little delay and is benefiting from the average winter conditions.

UNITED KINGDOM: Rapeseed area is forecast to increase 5 percent to 410,000 hectares in 1991/92. The winter rapeseed crop condition is variable this year. New crop rapeseed has emerged well in light soils, but uneven on heavy soils, such as in East Angelia. Nearly all the area is reportedly sown in double low varieties.

DENMARK: Rapeseed area is forecast to increase marginally to 270,000 hectares in 1991/92. Winter rapeseed sowing is reported at 215,000 hectares, up 37 percent from last year due to Danish legislation requiring 65 percent of the arable land covered with growth during the winter to absorb nitrate washout. A mild winter, coupled with hardy winter rapeseed varieties will improve yield prospects for 1991/92.

SPAIN: Rapeseed area is forecast to increase to 30,000 hectares, up from 25,000 hectares last year. Spanish farmers are continuing the trend to plant more rapeseed as an alternative crop.

ITALY: Rapeseed area is forecast unchanged at 13,000 hectares. After 2 years of drier than normal weather in central Italy, conditions this winter have improved potential yield prospects.

THE NETHERLANDS AND BELGIUM-LUXEMBOURG: Rapeseed area in the Netherlands is forecast unchanged at 7,000 hectares. The Government is a major producer of rapeseed as they plant the crop on reclaimed land before turning the land over to the farmer. Belgium-Luxembourg is forecast to increase rapeseed area significantly during 1991/92, climbing to 8,000 hectares from 5,000 hectares last year. The farmers view rapeseed as a profitable crop for 1991/92.

TABLE 18

## EC-12 Rapeseed Area, Yield, and Production

Year	Harvested Area (1,000/Ha)	Yield (MT/Ha)	Production (1,000/MT)
1980/81	753	2.72	2,050
1981/82	920	2.20	2,024
1982/83	1,029	2.58	2,659
1983/84	1,117	2.19	2,448
1984/85	1,178	2.92	3,439
1985/86	1,271	2.87	3,648
1986/87	1,270	2.91	3,696
1987/88	1,861	3.20	5,952
1988/89	1,840	2.81	5,170
1989/90	1,662	2.96	4,924
1990/91	1,963	2.92	5,723
5-Year Avg.	1,719	2.96	5,093
Planted 1991/92	2,110		

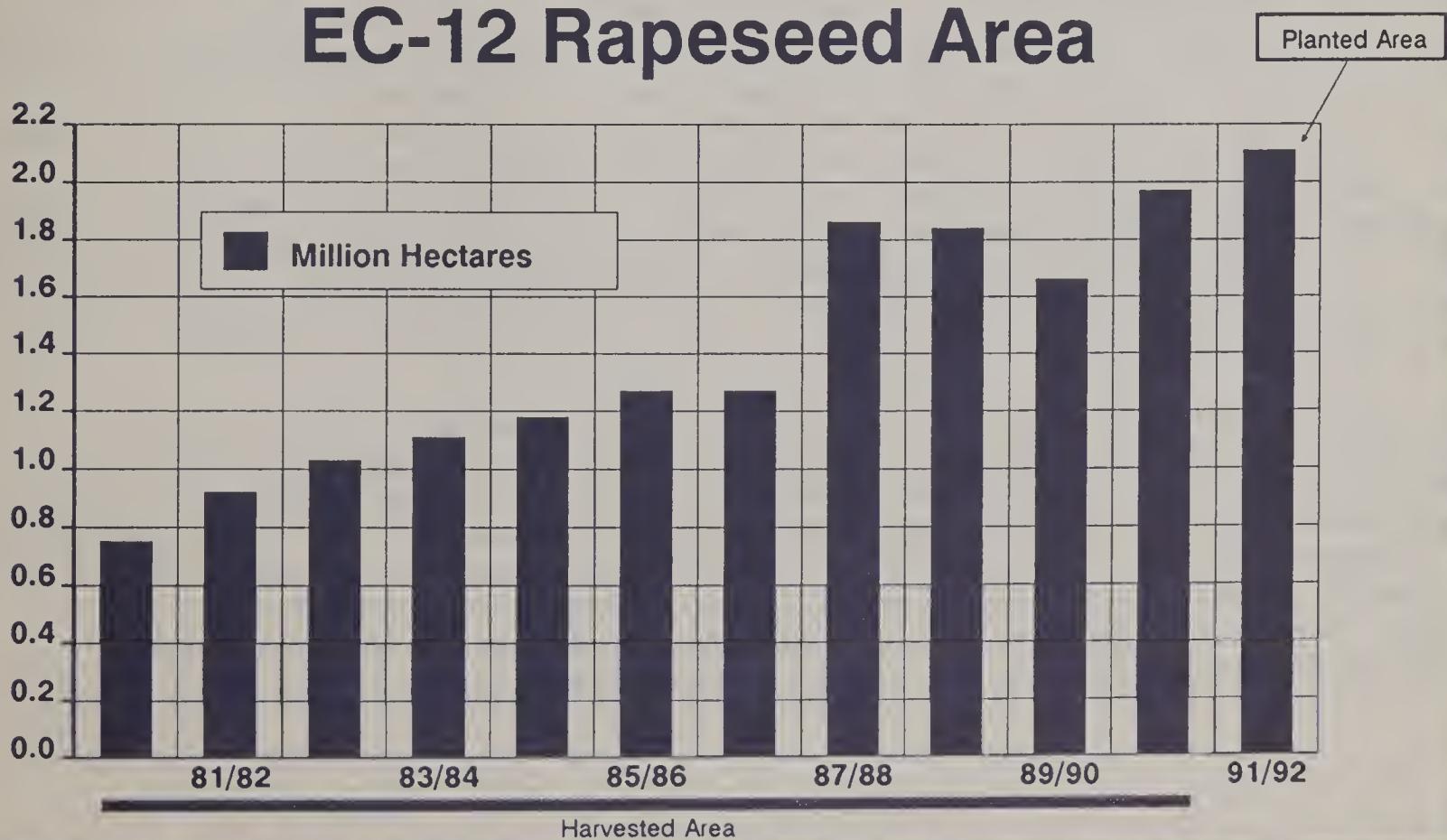
\* / Does not include eastern Germany.

CHART 3

### Area Harvested VS. Planted For 1991/92

Below is a comparison of harvested rapeseed area with the initial forecast of planted area for 1991/92. Planted area is an unofficial USDA estimate provided by U.S. agricultural attaches stationed in EC countries. This data excludes eastern Germany--estimated at 250,000 hectares for 1991/92. Official USDA harvested area and production estimates will be published in July 1991.

### EC-12 Rapeseed Area



## SENEGALESE AGRICULTURAL PRODUCTION

### AGRICULTURAL OVERVIEW

The Government of Senegal has historically performed a major role in regulating the agricultural sector. During the mid-1980's however, the Government launched a new agricultural policy as part of an economic reform package aimed at reducing the role of the Government in the agricultural and commercial sectors. The policy intended to increase productivity and reduce government intervention by eliminating input subsidy and credit programs, removing support prices on coarse grains, and liberalizing domestic grain markets. The Government retained its role in extension and research services, holding seed stocks, and regulating the market for oilseeds. As part of a current banking reform movement the Government has also reduced its ownership in any bank to 25 percent. This initiative has forced many banks to close or be restructured. As a result, banks were reluctant to extend credit to farmers during this transition period, leaving farmers without adequate funds for the 1990/91 planting season.

The reduced availability of credit for the purchase of inputs coupled with the progressive reduction of input subsidies, have limited fertilizer use during the 1990/91 season. Most inputs are purchased for use on cash crops such as peanuts and cotton, although some fertilizers and pesticides are used on irrigated rice and corn. While grain production is primarily for local consumption needs, oilseeds are produced to generate export earnings, leaving the oilseed sector more vulnerable to changes in government price controls, input subsidy reductions, and credit limitations.

Agricultural activity is localized in two distinct growing regions, The Peanut Basin in the south and the Senegal River Basin along the northern border of the country. The major agricultural region, the Peanut Basin, lies within the Sahelian zone of West Africa and can be characterized as having a tropical climate with a long dry season. Oilseed and grain production are primarily rain-fed, and productivity is dependent on the length, timing, and intensity of the rainy season, which extends from May until October. Peanut and millet are the predominant crops grown in the Peanut Basin. Farmers in this region currently face a growing problem with soil nutrient depletion. Local farmers use virtually all peanut and millet vegetative material as fuel and feed, incorporating a negligible amount of organic matter back into the soil. This problem has been compounded in recent years by the decline in fertilizer use as input subsidies and purchase prices are phased out. Irrigated rice and corn are grown in the Senegal River Basin, which falls within the Sahelian or sub-desert region.

The 1990/91 rainy season began late, with inadequate and poorly distributed rainfall for all major growing regions. Cumulative rainfall totals in the Peanut Basin ranged from approximately 20 to 70 percent of the 30-year average. The uneven temporal and spatial rainfall distribution was most damaging to crop development, although the southern Peanut Basin, which is the major cotton producing region, was less affected. Crop production in the Senegal River Basin was affected by the lack of adequate precipitation and was further retarded by crop diseases and insect infestations.

## COARSE GRAINS

Coarse grains, including millet, sorghum, and corn, are grown for local consumption in the rural areas. Only a small percentage of coarse grain production enters the commercial sector and is sold to urban markets. Land preparation, tillage, and cultivation are performed primarily by hand or with the assistance of draft animals. Planting begins with the onset of the rainy season in May and continues until July. The late arrival of the 1990/91 rainy season resulted in late plantings and poor early crop establishment. Harvesting occurs from September through November. Senegalese farmers planted 1.111 MHa of coarse grains in 1990/91, a 7 percent decrease from the 1.197 MHa planted last year. The area decline, compounded by weather-induced yield reductions resulted in a 10 percent decline in 1990/91 coarse grain production.

Millet is Senegal's most widely produced grain crop. In 1990/91 Senegal produced an estimated 567,000 tons, down 13 percent from the 650,000 tons produced in 1989/90. The decreased production was due both to an area shift to peanuts and to dry weather. All production is rain-fed with the exception of approximately 6,000 irrigated hectares in the Senegal River Basin. Sixty percent of the crop is produced in the Peanut Basin, where millet competes with peanut for area. However, millet is not a competing source of cash income since it is grown as a staple food for home consumption. Fertilizers and pesticides are generally not applied to millet, although some application of NPK 14-7-7 may occur. This year purchases of this fertilizer were limited due to the elimination of government input subsidies.

Sorghum production, which is centered in the primary peanut and millet growing regions, was also negatively impacted by the poor weather. Seventy percent of Senegal's corn crop is produced in the southeastern Peanut Basin near Kolda and Tambacounda. Production is typically located near villages, where the farmers can easily utilize manure and village waste as fertilizer. Corn is usually the first crop planted in the south, with planting under way in May and harvest beginning in August. In the southern-most areas farmers have recently begun planting corn instead of millet, due to corn's greater resistance to parasitic diseases. Corn production is primarily rain-fed, with approximately 500 hectares of irrigated corn grown along the northern Senegal River.

## RICE

Rice is planted from August to mid-September and is grown in two distinct regions. The northern rice production areas in the Senegal River Basin account for 55 percent of total production. Farmers in the southern Casamance region produce 40 percent of Senegal's rice crop. All production in the Senegal River Basin is irrigated, whereas production in Casamance is rainfed. Fertilizer use is limited to areas of high rainfall or irrigation. Irrigated rice production costs are high due to expensive irrigation supplies and land development costs - associated with the expansion of irrigated area and the completion of the Manatali and Diama dams. Due to credit limitations at the outset of the 1990/91 season, farmers in the Senegal River Basin lacked the funds needed to purchase irrigation equipment. Producer inability to obtain credit for input purchases and equipment resulted in yield reductions. Recent civil unrest in the Casamance region disrupted production operations as the conflict intensified. The irregular 1990/91 rainy season also contributed to yield reductions.

## OILSEEDS

Oilseeds are cash crop alternatives to the basic food crops, such as rice, millet, sorghum, and corn. Peanuts and cottonseed are the two predominant oilseeds produced in Senegal. Government oilseed policy is primarily aimed at supporting farm income. A secondary objective is to encourage foreign exchange earnings. These objectives are achieved through the implementation of guaranteed producer prices and the underwriting of the crushing industry. Subsidizing of cottonseed and peanut export products, combined with the taxing of imports, serves as a means of combating the country's reportedly overvalued currency.

Senegal is Africa's largest peanut producing country. The most important oilseed crop is peanuts, and they have been an important cash crop since the mid-1800's. Oilstock peanuts are the most widely produced. The export of peanut meal and oil is a major foreign exchange earner for Senegal. Smuggling of peanuts from The Gambia into Senegal is widespread; Gambian farmers can move their crop across the border and sell the peanuts for a greater profit, due to the higher peanut support price paid in Senegal. Last year farmers produced an estimated 0.815 MMT of peanuts from 0.784 MHa, leaving farmers with a substantial carry over of personal seed stocks. Significant area diversions from millet to peanuts occurred due to the abundance of seed. However, this area increase was more than offset by the weather-induced yield reductions.

Cottonseed is produced as a by-product of the cotton fiber industry. Area planted to cotton reached a peak in 1984/85 at 46,000 hectares with production at 87,000 480-pound-bales, then began to decline as farmers responded to the lack of incentives for cotton production. The gradual elimination of subsidies on farm inputs has made production of cotton, which requires intensive use of inputs, less attractive to farmers. Area planted to cotton fell to a record low level of 24,000 hectares last year. Cotton area increased 50 percent to an estimated 36,000 hectares in 1990/91, as producers returned to cotton and planted less food crops such as millet and cowpeas. The inadequate and poorly distributed rainfall during the 1990/91 growing season also affected cotton yields. However, the primary cotton growing region in Casamance is located in the southern Peanut Basin, where rainfall was somewhat more favorable than in other regions. Cotton yields were therefore not reduced as dramatically as peanut yields. Cotton production in 1990/91 is expected to be about 55,000 480-pound-bales. There is growing concern that the reductions in subsidies on farm inputs may seriously impact future productivity of the cotton sector. Traditionally, cotton has been a relatively profitable crop, however, the high production costs associated with cotton make it sensitive to credit limitations and input costs.

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TABLE 19

# Senegal Grains and Oilseeds

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	Estimate 1990/91	Average 1986-90
<b>AREA HARVESTED</b>												
(1,000 hectares)												
Corn	78	57	86	71	83	111	95	99	110	112	114	105
Millet	1,115	850	991	784	1,002	1,335	856	946	893	953	864	996
Sorghum	--	--	--	--	--	--	--	--	128	130	133	78
<i>COARSE GRAINS</i>	<b>1,193</b>	<b>907</b>	<b>1,077</b>	<b>855</b>	<b>1,085</b>	<b>1,446</b>	<b>951</b>	<b>1,173</b>	<b>1,133</b>	<b>1,197</b>	<b>1,111</b>	<b>1,180</b>
Rice, Milled	67	69	68	52	66	71	72	74	81	80	79	75
<i>GRAINS</i>	<b>1,260</b>	<b>976</b>	<b>1,145</b>	<b>907</b>	<b>1,151</b>	<b>1,517</b>	<b>1,023</b>	<b>1,247</b>	<b>1,214</b>	<b>1,277</b>	<b>1,190</b>	<b>1,255</b>
Cottonseed	30	39	36	33	46	38	25	29	39	24	36	31
Peanut	1,064	1,080	1,121	937	874	607	808	846	903	784	915	789
<i>TOTAL OILSEEDS</i>	<b>1,094</b>	<b>1,119</b>	<b>1,157</b>	<b>970</b>	<b>920</b>	<b>645</b>	<b>833</b>	<b>875</b>	<b>942</b>	<b>808</b>	<b>951</b>	<b>820</b>
<b>YIELDS</b>												
(metric tons per hectare)												
Corn	0.73	1.19	0.95	0.86	1.19	1.32	1.14	1.15	1.12	1.17	1.11	1.18
Millet	0.50	0.87	0.59	0.45	0.47	0.71	0.59	0.73	0.54	0.68	0.66	0.66
Sorghum	--	--	--	--	--	--	--	--	0.87	0.85	0.95	0.90
Rice, Milled	0.97	1.74	1.54	2.10	2.05	2.06	2.06	1.82	1.80	2.21	2.05	2.00
Cottonseed	0.50	0.64	0.92	0.58	0.83	0.42	0.60	0.69	0.64	0.75	0.61	0.58
Peanut	0.49	0.81	0.99	0.61	0.64	0.97	1.01	1.10	0.76	1.04	0.73	0.97
<b>PRODUCTION</b>												
(1,000 metric tons)												
Corn	57	68	82	61	99	147	108	114	123	131	127	124
Millet	553	736	585	352	471	950	502	690	485	650	567	655
Sorghum	--	--	--	--	--	--	--	--	111	110	130	70
<i>COARSE GRAINS</i>	<b>610</b>	<b>804</b>	<b>667</b>	<b>413</b>	<b>570</b>	<b>1,097</b>	<b>610</b>	<b>915</b>	<b>718</b>	<b>911</b>	<b>820</b>	<b>850</b>
Rice, Milled	65	120	105	109	135	146	148	135	146	177	162	150
<i>GRAINS</i>	<b>675</b>	<b>924</b>	<b>772</b>	<b>522</b>	<b>705</b>	<b>1,243</b>	<b>758</b>	<b>1,050</b>	<b>864</b>	<b>1,088</b>	<b>982</b>	<b>1,000</b>
Cottonseed	15	25	33	19	38	16	15	20	25	18	22	18
Peanut	521	878	1,109	568	560	587	817	932	690	815	670	768
Palm Kernel	5	5	5	5	5	5	5	6	6	6	6	5
<i>TOTAL OILSEEDS</i>	<b>541</b>	<b>908</b>	<b>1,147</b>	<b>592</b>	<b>603</b>	<b>608</b>	<b>838</b>	<b>958</b>	<b>721</b>	<b>839</b>	<b>698</b>	<b>791</b>

## INDONESIAN OILSEEDS

Total Indonesian oilseed production is expected to reach a record 3.94 million tons during 1990/91, the fourth record crop in as many years. This figure includes copra, soybeans, peanuts, and cottonseed. The USDA total oilseed figure does not include tropical oils production, such as palm oil, choosing instead to publish palm oil as a separate category. Palm oil accounts for the bulk of domestic production, estimated at a record 2.35 million tons for 1990/91.

### COPRA

Copra rivals soybeans in volume of production, estimated at 1.25 million tons. But unlike soybeans, copra output has remained stable over the last 10 years, while soybean production nearly doubled. Copra is grown throughout Indonesia, 97 percent by small private producers. The island of Celebes (also known as Sulawesi) accounts for 25 percent of total output, followed by Sumatra, Java, and Ambon. The use of coconut for domestic consumption and home-crush for oil is widespread. Copra that enters the commercial market is influenced by the excess above domestic utilization and the price of copra--which is sensitive to the copra situation in the neighboring Philippines. Area planted to coconut trees has remained stable, with trees being replanted due to age and low productivity. The U.S. agricultural attache stationed in Jakarta reports that an estimated 30 percent of the coconut trees on North Celebes require replacement. Most coconut trees are the low yielding variety (characteristic of tall trees). It is estimated that more than 50 percent of all trees are over 10 years old with many of these over 50 years old. Re-plantings are proceeding at a slow pace however, as government credit has been in short supply, leaving most producers dependent on World Bank funds through the Smallholders Coconut Development Program.

### SOYBEANS

Soybean production in 1990/91 is estimated at 1.20 million tons, up 0.1 million from last year, and equal to the record set during 1988/89. Although average yield was slightly below the 5-year trend, record harvested area bolstered output. Soybeans are grown mainly in the East and Central regions of the island of Java (accounting for approximately 57 percent). The remainder is grown on Sumatra (about 24 percent) and more recently on the island of Celebes (5 percent). Many soybeans are double cropped, with the first harvest during February through April and the second harvest lasting from July through August. Competitive crops are mainly rice and corn. Rice is the most important crop due to the Government's long-standing rice support program--including input price supports, extension services, and government credit--to attain self-sufficiency. This is particularly true in the central Java region, where both soybeans and rice are significant crops. Recent reductions in government input supports for rice and soybeans--which are not expected to effect soybeans due to the low use of fertilizers by producers--and real rice prices below last year, favors soybeans over rice for some producers. The Government has targeted soybean area expansion to increase by 300,000 hectares (equivalent to an estimated 295,000 tons) over the next few years, but this level may have little chance of success without additional incentives. At present, the major government incentive for soybeans is the protection of the domestic price which is often 30 to 50 percent above the world market price. BULOG, the Indonesian National Food Agency, effectively supports the domestic price by restricting imports of soybeans and soybean meal through import licensing.

## PEANUTS

Indonesia is the world's fourth largest peanut producer, but only comprises 4 percent of the world's total output. With harvested area estimated at 620,000 hectares and adequate rainfall, 1990/91 production is pegged at a record 880,000 tons, up slightly over last year. Peanuts are grown mainly on the islands of Java (70 percent) and Sumatra (14 percent). There is no active Indonesian Government program for peanuts as there is for other commodities such as rice and soybeans. The Government's first priority in food production is aimed at maintaining rice self-sufficiency, with its second priority focused on the achievement of soybean self-sufficiency. The Government allocates limited credit to the farmers and they in turn prefer to use it for rice. Despite Indonesia's attempts to increase peanut production through research into improved varieties and input packages, production increases have been small from year to year and are unlikely to change in the near future.

## COTTONSEED

Cotton production is a minor crop in Indonesia, resulting in estimated cottonseed output of just 6,000 tons in 1990/91, unchanged for the last 3 years. Cottonseed output is not expected to increase in the future, since net returns to domestically produced cotton are generally below that of alternative crops. Cotton is mainly grown on the south and southeast of Celebes, followed by the islands of Tenggara and Java. Yields are typically low, as cotton is usually planted on dry, non-irrigated, marginal land. In addition, Indonesia's tropical climate and pest problems pose continuous obstacles to efficient and profitable production.

## PALM OIL

Palm oil production is by far the largest domestic oil crop grown in Indonesia, estimated at a record 2.35 million tons in 1990/91, accounting for 20 percent of world output. This places Indonesia as the world's second largest palm oil producer, but well behind it's neighbor Malaysia--estimated to produce 6.20 million tons in 1990/91. Palm oil output has virtually set new records every year. With the recent aggressive government programs to stimulate private investment in oil palm development, this sector has begun to increase output at a more rapid pace. With more new trees beginning to bear fruit, output has increased by over 30 percent since 1988/89. The Government's planned oil palm expansion has set a goal of 4.0 million tons of oil by the year 1993, but the cost of corresponding transportation infrastructure and processing facilities will likely slow this progress.

Oil palm is grown throughout the provinces of Indonesia, with the largest area in North Sumatra. Recent expansion has taken place in southern Sumatra, Sulawesi, and Kalimantan, as well as other provinces. The Government's program to encourage the development of oil palm plantations includes liberal licensing policies and the Transmigration Related Nucleus Estate and Smallholders (NES-Trans) program, in order to ensure that small producers will have access to the commercial sector. At present, government controlled plantations account for two-thirds of large shareholder production, the rest by privately financed operations--to date dominated by just three private firms. The Government reports that over the past year dozens of licenses have been issued for new plantations and crushing facilities. Some of these plans will not materialize but expansion of Indonesia's oil palm industry is healthy and is expected to continue to grow in the foreseeable future.

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**Sumatra**

This Island is the largest producer of palm oil, accounting for nearly 80 percent of total production. The northeast coast was the site of the original oil palm industry and has since spread all along the eastern coast. Nearly 25 percent of all soybeans and 14 percent of peanuts is grown on the Island as well.

Under a Government program, Kalimantan's potential growing areas along the west, south, and east coasts are now deforested and oil palm establishment has begun. However, poor roads on peat soils and the lack of sufficient processing facilities are limiting production potential.

Celebes's northeast peninsula is the traditional copra producing region. Besides copra, cotton is grown in the southeastern region and rice and peanuts are planted in rotation on the west coast. The east half of the island is affected by a weather pattern similar to the Philippines, while the western half is more like that of Java, resulting in two separate crop cycles.

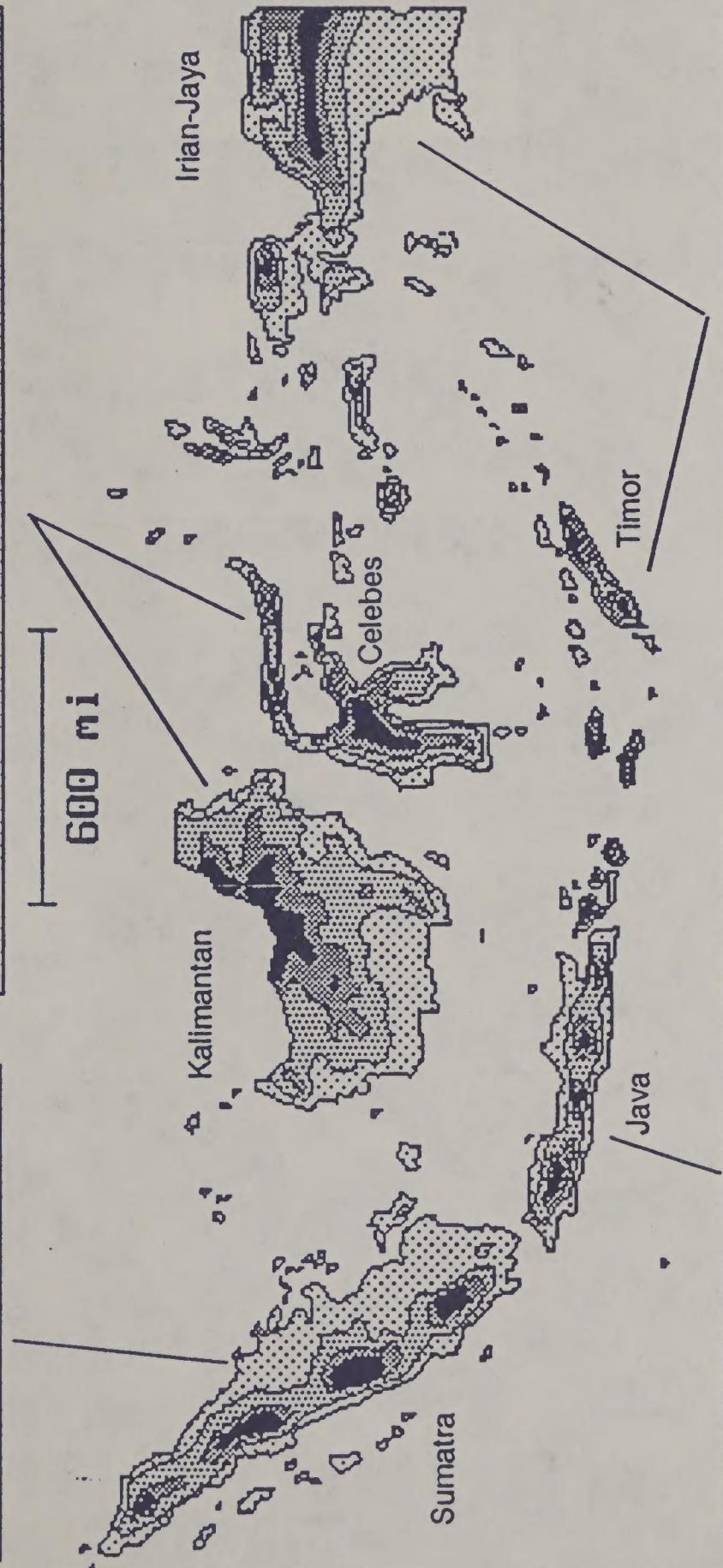
**INDONESIA**

**POPULATION**  
**184.0 MILLION**  
**AREA (SQ MI)**

741,097

**ELEVATION**  
**(IN FEET)**

= OVER 3280  
= 1640-3280  
= 656-1640  
= UNDER 656

**Java**

With the most fertile land of all the islands, Java produces over half of all Indonesia's soybeans, particularly on the eastern half of the Island. At least 70 percent of Indonesia's peanuts are grown on Java. Oil palm, cotton, and copra are also grown. Domestic soybeans are utilized as tofu by the Islanders-produced as a cottage industry. Most imported soybeans are crushed for meal to be used mainly by the poultry industry.

**Timor & Irian-Jaya**

Timor produces minor amounts of oil palm and copra. Irian-Jaya, consisting of the western half of New Guinea, is under a government program to establish an oil palm industry. However, poor soils and infrastructure have prevented significant development. Some palm trees are now approaching 7-years old—near fruit bearing age—yet the availability of sufficient processing facilities is far in the future.

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TABLE 20  
**Indonesia Oilseeds: Harvested Area, Yield, and Production**

	Palm Oil Production	Copra Production	Palm Kernel Production	Cottonseed			Peanut			Soybean			Total Oilseeds 1/ Area Production	
				1,000 MT	1,000 MT	1,000 Ha	MT/Ha	1,000 MT	1,000 Ha	MT/Ha	1,000 MT	1,000 Ha	1,000 MT	1,000 Ha
1969/70	217	734	48	6	0.17	1	--	--	--	695	0.72	498	701	1,281
1970/71	248	699	56	6	0.33	2	--	--	--	680	0.76	516	686	1,273
1971/72	269	887	59	8	0.38	3	--	--	--	698	0.74	518	706	1,467
1972/73	290	772	64	12	0.42	5	407	1.19	483	751	0.72	541	1,170	1,865
1973/74	351	656	74	17	0.12	2	409	1.25	512	768	0.77	589	1,194	1,833
1974/75	411	955	84	18	0.11	2	475	1.33	633	752	0.79	590	1,245	2,264
1975/76	434	1,115	82	11	0.27	3	414	1.37	568	646	0.81	522	1,071	2,290
1976/77	497	1,074	92	10	0.20	2	507	1.35	682	646	0.81	523	1,163	2,373
1977/78	532	1,077	99	5	0.20	1	506	1.47	743	733	0.84	617	1,244	2,537
1978/79	641	1,040	113	5	0.20	1	473	1.50	708	784	0.87	680	1,262	2,542
1979/80	702	1,158	121	12	0.17	2	506	1.55	783	732	0.89	653	1,250	2,717
1980/81	752	1,284	133	15	0.27	4	508	1.56	791	810	0.87	704	1,333	2,916
1981/82	884	1,205	144	24	0.33	8	461	1.58	728	608	0.86	521	1,093	2,606
1982/83	983	1,091	161	35	0.34	12	480	1.66	795	640	0.84	536	1,155	2,595
1983/84	1,150	1,225	250	30	0.30	9	523	1.43	747	859	0.90	769	1,412	3,000
1984/85	1,185	1,260	260	26	0.35	9	510	1.48	755	896	0.97	870	1,432	3,154
1985/86	1,280	1,250	285	33	0.33	11	515	1.52	780	970	0.98	950	1,518	3,276
1986/87	1,300	1,270	290	17	0.29	5	516	1.45	750	920	0.98	900	1,453	3,215
1987/88	1,370	1,250	420	17	0.29	5	550	1.43	786	950	1.00	950	1,517	3,411
1988/89	1,600	1,185	430	20	0.30	6	608	1.38	840	1,177	1.02	1,200	1,805	3,661
1989/90	2,150	1,280	550	20	0.30	6	612	1.43	875	1,150	0.96	1,100	1,782	3,811
1990/91	2,350	1,250	605	20	0.30	6	620	1.42	880	1,250	0.96	1,200	1,890	3,941

1/ Total does not include palm oil.  
= Indicates record level.

February 1991

Production Estimates & Crop Assessment Division, FAS, USDA